

## ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

### INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

**Product Name:** WLAN USB Module  
**Brand Name:** N/A  
**Model No.:** WM2011WU, WM2011WU-XX (X=0~9 or A~Z)  
**Model Difference:** For Market Segmentation  
**FCC ID:** 2AAK6WM2011WU  
**Report No.:** E2/2014/B0042  
**Issue Date:** Dec. 17, 2014  
**FCC Rule Part:** §15.247, Cat: DTS  
**Prepared for:** WIESON INTERNATIONAL CO., LTD.  
6F, No.276-1, Sec.1, Datong Rd., Xizhi Dist., New  
Taipei City 221, Taiwan, R.O.C.  
  
**Prepared by:** SGS Taiwan Ltd.  
Electronics & Communication Laboratory  
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**VERIFICATION OF COMPLIANCE****Applicant:**

WIESON INTERNATIONAL CO., LTD.

6F, No.276-1, Sec.1, Datong Rd., Xizhi Dist., New Taipei City 221,  
Taiwan, R.O.C.**Product Name:**

WLAN USB Module

**Brand Name:**

N/A

**Model No.:**

WM2011WU, WM2011WU-XX (X=0~9 or A~Z)

**Model Difference:**

For Market Segmentation

**FCC ID:**

2AAK6WM2011WU

**File Number:**

E2/2014/B0042

**Date of test:**

Nov. 25, 2014 ~ Dec. 11, 2014

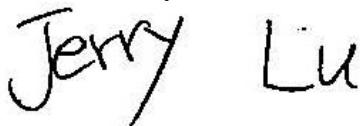
**Date of EUT Received:**

Nov. 25, 2014

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2009. The energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247.

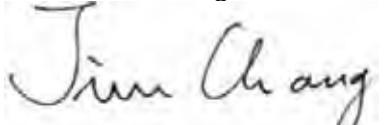
The test results of this report relate only to the tested sample identified in this report.

**Test By:****Date**

Dec. 17, 2014

*Jerry Lu / Engineer***Prepared By:****Date**

Dec. 17, 2014

*Violetta Tang / Clerk***Approved By:****Date**

Dec. 17, 2014

*Jim Chang / Supervisor*

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## Version

Version No.	Date	Description
00	Dec. 17, 2014	Initial creation of document

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## 1 GENERAL INFORMATION

### 1.1 Product description

General:

Product Name:	WLAN USB Module
Brand Name:	N/A
Model No.:	WM2011WU, WM2011WU-XX (X=0~9 or A~Z)
Model Difference:	For Market Segmentation
Hardware Version:	1.0
Software Version:	1.0
Power Supply:	3.3Vdc

WLAN 2.4GHz:

Wi-Fi	Frequency Range	Channels	Rated Power (Peak)	Modulation Technology
11b/g	2412-2462	11	b: 16.98dBm g: 15.98dBm	DSSS, OFDM
11n HT20	2412-2462	11	13.92dBm (CH0) 14.49dBm (CH1) 16.96dBm (CH0+CH1)	OFDM
11n HT40	2422-2452	7	13.88dBm (CH0) 14.22dBm (CH1) 16.98dBm (CH0+CH1)	OFDM
Antenna Designation:		<b>Antenna A:</b> Dipole Antenna, Peak Gain: 1.95dBi Model No.: N/A, Supplier: WIESON INTERNATIONAL CO., LTD. <b>Antenna B:</b> Metal Antenna, Peak Gain: 3.0dBi Model No.: ALC140-052030-A, Supplier: LYNwave <b>Antenna C:</b> Embedded Antenna, Peak Gain: 3.0dBi Model No.: ALC140-051021-A, Supplier: LYNwave <b>Antenna D:</b> Metal Antenna, Peak Gain: 3.0dBi Model No.: ALO140-052030, Supplier: LYNwave		
Modulation type:		CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM		
Transition Rate:		802.11 b: 1/2/5.5/11 Mbps 802.11 g: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 144Mbps 802.11 n_40MHz: 13.5 – 300Mbps		

The test report applies for WLAN 802.11 b/g/n function.

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## IEEE 802.11n Spec:

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Datarate(Mbps)			
					800nsGI		400nsGI					
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.200	15
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.400	30
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.700	45
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.900	60
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.300	90
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.800	120
6	1	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.000	135
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.200	150

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bite per single carrier
NCBPS	Number of coded bite per symbol
NDBPS	Number of data bite per symbol
GI	Guard interval

## 802.11n-HT20 MCS8 -15

MCS Index	Modulation	R	$N_{BPSCS}(i_{SS})$	$N_{SD}$	$N_{SP}$	$N_{CBPS}$	$N_{DBPS}$	Data rate (Mb/s)	
								800 ns GI	400 ns GI (see NOTE)
8	BPSK	1/2	1	52	4	104	52	13.0	14.4
9	QPSK	1/2	2	52	4	208	104	26.0	28.9
10	QPSK	3/4	2	52	4	208	156	39.0	43.3
11	16-QAM	1/2	4	52	4	416	208	52.0	57.8
12	16-QAM	3/4	4	52	4	416	312	78.0	86.7
13	64-QAM	2/3	6	52	4	624	416	104.0	115.6
14	64-QAM	3/4	6	52	4	624	468	117.0	130.0
15	64-QAM	5/6	6	52	4	624	520	130.0	144.4

NOTE—The 400 ns GI rate values are rounded to 1 decimal place.

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## 802.11n\_HT40 MCS8 -15

MCS Index	Modulation	$R$	$N_{BPSCS}(i_{SS})$	$N_{SD}$	$N_{SP}$	$N_{CBPS}$	$N_{DBPS}$	Data rate (Mb/s)	
								800 ns GI	400 ns GI
8	BPSK	1/2	1	108	6	216	108	27.0	30.0
9	QPSK	1/2	2	108	6	432	216	54.0	60.0
10	QPSK	3/4	2	108	6	432	324	81.0	90.0
11	16-QAM	1/2	4	108	6	864	432	108.0	120.0
12	16-QAM	3/4	4	108	6	864	648	162.0	180.0
13	64-QAM	2/3	6	108	6	1296	864	216.0	240.0
14	64-QAM	3/4	6	108	6	1296	972	243.0	270.0
15	64-QAM	5/6	6	108	6	1296	1080	270.0	300.0

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## 1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AAK6WM2011WU** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

## 1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4:2009. Radiated testing was performed at an antenna to EUT distance 3 meters.

Tested in accordance with Jun 2014 KDB558074 D01 v03r02 for compliance to FCC 47CFR 15.247 requirements.

## 1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2009.

FCC Registration Number: 990257. The address of SGS Taiwan Ltd. Electronics & Communication Laboratory 1F, No.134, Wukung Road New Taipei City TAIWAN 24803, Canada Registration Number: 4620A-5

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan Township, Taoyuan County, Taiwan which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. FCC Registration Number: 455997. The address of SGS Taiwan Ltd. Electronics & Communication Laboratory 1F, No.134, Wukung Road New Taipei City TAIWAN 24803, IC Registration Number: 4620A-6.

## 1.5 Special Accessories

There are no special accessories used while test was conducted.

## 1.6 Equipment Modifications

There was no modification incorporated into the EUT.

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## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the general criterion in Section 7.1 of ANSI C63.4:2009. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz, and the measurement procedure 7.3 in ANSI 63.4:2009 is followed to carry out the test. The CISPR Quasi-Peak and Average detector mode is employed according to §15.107

#### 2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna. according to the requirements in Section 8 and 13 and of ANSI C63.4:2009 and RSS-Gen:2010.

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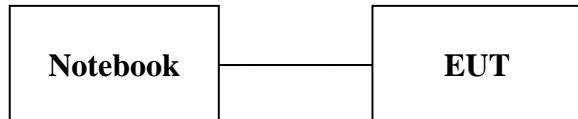
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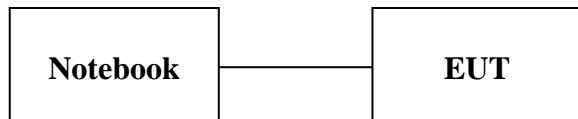
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## 2.4 Configuration of Tested System

**Fig. 2-1 Radiated Emission**



**Fig. 2-2 Conducted (Antenna Port) Configuration**



**Table 2-1 Equipment Used in Tested System**

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1.	WLAN Test Software	MPTool	N/A	N/A	N/A	N/A
2.	Notebook	Lenovo	L430	PK-0CGFF	shielding	Un-shielding

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### 3 SUMMARY OF TEST RESULTS

FCC	Description Of Test	Result
§15.207(a)	AC Power Line Conducted Emission	N/A
§15.247(b) (3)	Peak Output Power	Compliant
§15.247(a)(2)	6dB Bandwidth	Compliant
§15.247(d)	100 KHz Bandwidth Of Frequency Band Edges	Compliant
§15.247(d)	Spurious Emission	Compliant
§15.247(e)	Peak Power Density	Compliant
§15.203	Antenna Requirement	Compliant
§2.1091	Maximum Permissible Exposure	Compliant

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## 4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

802.11 b mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 1Mbps lowest data rate are chosen for full testing.

802.11 g mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6Mbps lowest data rate are chosen for full testing.

802.11 n\_20MHz mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6.5Mbps lowest data rate are chosen for full testing.

802.11 n\_40MHz: Lowest (2422MHz) and mid (2437MHz) and high (2452MHz) with 13.5Mbps lowest data rate are chosen for full testing.

The worst case is determined by the output power that generates the highest emission. As examined in the section of output power measurement, the section 7.5, the lowest data rate at b/g/n\_HT20/n\_HT40 resulted the highest level of fundamental emission, and therefore, the lowest data rate is chosen as the worst-case to conduct the remaining of other mandatory test cases.

The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11b/g/n WLAN Transmitter for channel Low, Mid and High, the worst case H position was reported.

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## 5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
AC Power Line Conducted Emission	+/- 2.586 dB
Peak Output Power	+/- 1.55dB (for Spectrum) +/- 1.42 dB (for Power Meter)
6dB Bandwidth	+/- 123.36 Hz
100 KHz Bandwidth Of Frequency Band Edges	+/- 1.55 dB
Peak Power Density	+/- 1.55 dB
Temperature	+/- 0.8 °C
Humidity	+/- 4.7 %
DC / AC Power Source	DC= +/- 1%, AC=+/- 0.2%

Radiated Spurious Emission:

Measurement uncertainty (Polarization : <b>Vertical</b> )	30MHz - 180MHz: +/- 3.37dB
	180MHz -417MHz: +/- 3.19dB
	0.417GHz-1GHz: +/- 3.19dB
	1GHz - 18GHz: +/- 4.04dB
	18GHz - 40GHz: +/- 4.04dB

Measurement uncertainty (Polarization : <b>Horizontal</b> )	30MHz - 167MHz: +/- 4.22dB
	167MHz -500MHz: +/- 3.44dB
	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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## 6 CONDUCTED EMISSION TEST

### 6.1 Standard Applicable:

According to §15.207, frequency range within 150KHz to 30MHz shall not exceed the Limit table as below.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

#### Note

1. The lower limit shall apply at the transition frequencies

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 6.2 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESCI 3	101311	2014/06/20	2015/06/19
Coaxial Cables	N/A	N30N30-1042-150cm	N/A	2014/02/07	2015/02/06
LISN	Schwarzbeck	NSLK 8127	8127-648	2014/06/10	2015/06/09
LISN	Rolf-Heine	NNB-2/16Z	99012	2014/03/26	2015/03/25
Test Software	Farad	EZ-EMC	Ver. SGS-03A2	N.C.R.	N.C.R.

### 6.3 EUT Setup:

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.4:2009.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
3. The LISN was connected with 120Vac/60Hz power source.

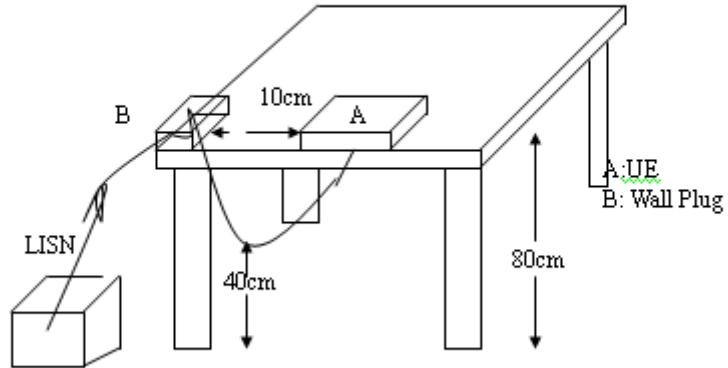
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## 6.4 Test SET-UP (Block Diagram of Configuration)



## 6.5 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all phases of power being supplied by given UE are completed

## 6.6 Measurement Result:

N/A, the device is powered by 3.3V DC Power Supply.

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## 7 PEAK OUTPUT POWER MEASUREMENT

### 7.1 Standard Applicable:

According to §15.247 (b)

(3) For systems using digital modulation in the 902-928 MHz and 2400-2483.5 MHz: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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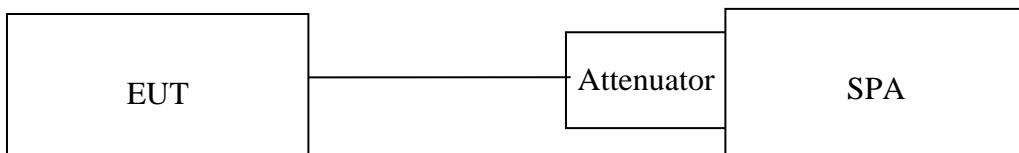
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## 7.2 Measurement Equipment Used:

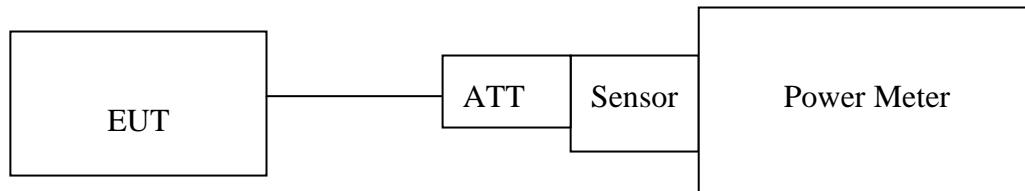
Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	N9010A	MY53400256	2014/10/15	2015/10/14
Power Meter	Anritsu	ML2496A	1326001	2014/06/20	2015/06/19
Power Sensor	Anritsu	MA2411B	1315048	2014/06/20	2015/06/19
Power Sensor	Anritsu	MA2411B	1315049	2014/06/20	2015/06/19
Coaxial Cable 30cm	WOKEN	00100A1F1A19 5C	2	2014/01/06	2015/01/05
DC Block	Mini-Circuits	BLK-18-S+	4	2014/01/06	2015/01/05
Splitter	RF-LAMBAD	RFLT2W1G18 G	11-JSPF412-01 9	2014/01/06	2015/01/05
Attenuator	WOKEN	218FS-10	7	2014/01/06	2015/01/05
Bluetooth Test Set	Anritsu	8852B	1329002	2014/07/16	2015/07/15

## 7.3 Test Set-up:

Spectrum:



Power Meter:



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## 7.4 Measurement Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter or spectrum. **(Peak power setting on Spectrum:** Channel power function, RBW = 1MHz, VBW = 3MHz, Span: 30/60MHz, Detector =peak, Sweep = Auto. Setting on spectrum is adjusted based on the mandatory procedure in 9.1.2 of the KDB558074). Power Meter is used as the auxiliary test equipment to conduct the output power measurement. 9.1.3 in KDB558074 is followed.  
**(Avg. power setting on Spectrum:** Channel power function, RBW = 1MHz, VBW = 3MHz, Span: 30/60MHz, Detector =Avg., Trace avg =100, Sweep = Auto, Setting on spectrum is adjusted based on the mandatory procedure in 9.2.2.4 of the KDB558074). Power Meter is used as the auxiliary test equipment to conduct the output power measurement. 9.2.3, option 3 in KDB558074 is followed.
3. Record the max. Reading as observed from Spectrum or Power Meter.
4. Repeat above procedures until all frequency of interest measured was complete.

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*Pre-analysis Check: While conducting average power measurement, duty cycle of each mode (a/n\_ht20 /n\_ht40) shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones: b = 100%, g = 100%, and n\_ht\_20 = 100%, n\_ht\_40 = 100%, where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.*

**Formula:**

$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff})$$

**Test Procedure:**

Set span = 0, RBW = 8MHz, VBW = 8MHz, Detector = Peak

Duty Cycle:

	Duty Cycle	Duty Factor (dBm)
802.11b	1	0
802.11g	1	0
802.11n_20 (2.4G)	1	0
802.11n_40 (2.4G)	1	0

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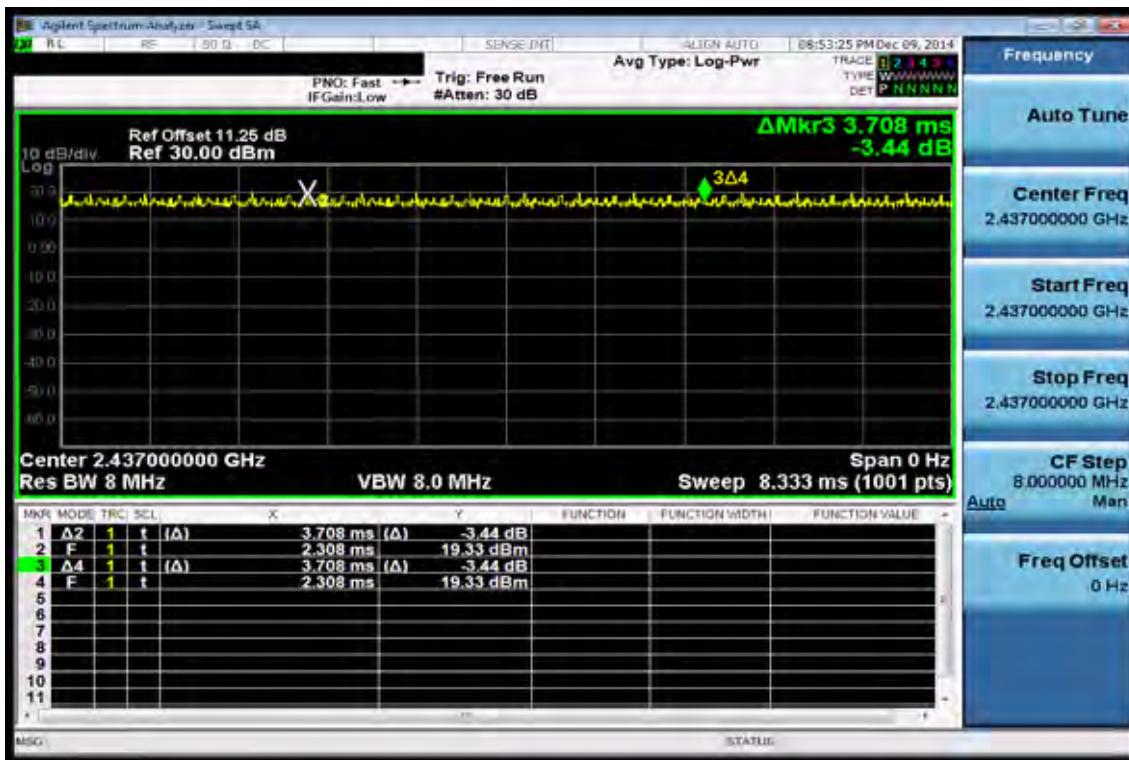
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## Duty Factor:

## 802.11 b



## 802.11 g



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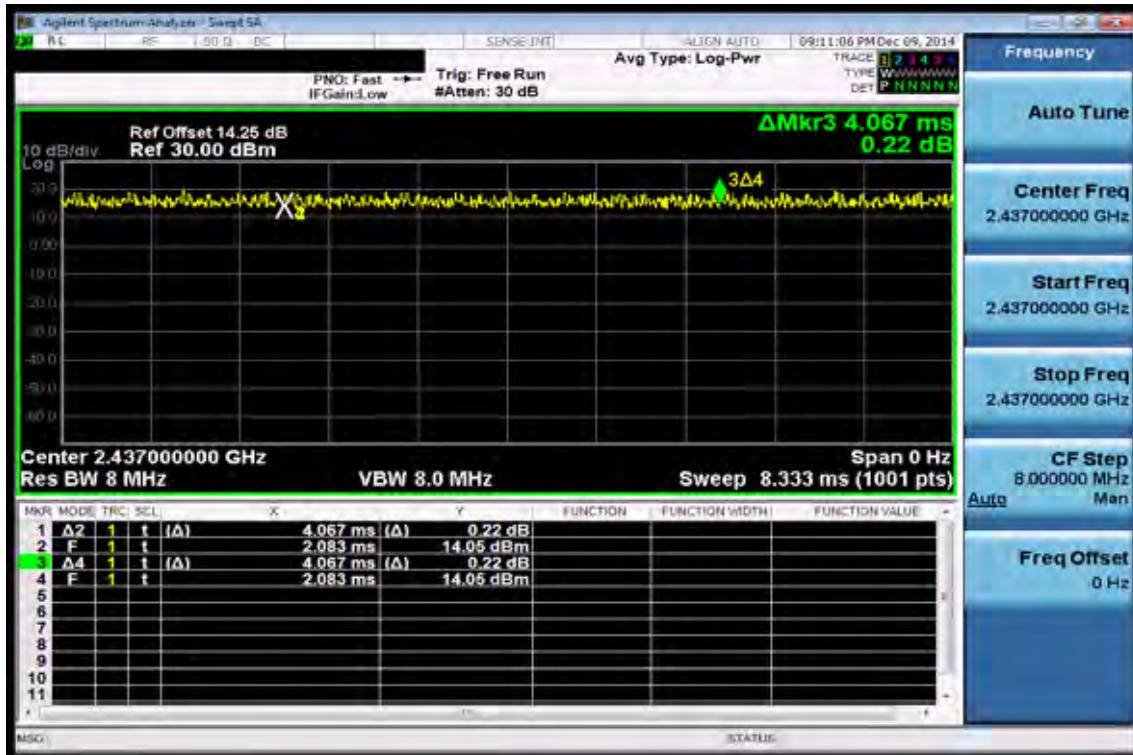
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## 802.11 n\_20 MHz



## 802.11 n\_40 MHz



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## 7.5 Measurement Result:

### 802.11b

		Peak Power Output (dBm)				Required Limit	
CH	Frequency (MHz)	Data Rate					
		1	2	5.5	11		
1	2412	16.81	16.78	16.74	16.70	1 Watt = 30 dBm	
6	2437	16.95	16.90	16.87	16.85	1 Watt = 30 dBm	
11	2462	16.98	16.91	16.86	16.84	1 Watt = 30 dBm	

		Average Power Output (dBm)				Required Limit	
CH	Frequency (MHz)	Data Rate					
		1	2	5.5	11		
1	2412	14.89	14.65	14.49	14.32	1 Watt = 30 dBm	
6	2437	14.95	14.74	14.52	14.36	1 Watt = 30 dBm	
11	2462	14.90	14.71	14.50	14.35	1 Watt = 30 dBm	

### 802.11g

		Peak Power Output(dBm)								Required Limit	
CH	Frequency (MHz)	Data Rate									
		6	9	12	18	24	36	48	54		
1	2412	15.68	15.57	15.49	15.41	15.34	15.28	15.21	15.13	1 Watt = 30 dBm	
6	2437	15.98	15.89	15.81	15.76	15.69	15.61	15.54	15.48	1 Watt = 30 dBm	
11	2462	15.92	15.83	15.78	15.71	15.66	15.58	15.50	15.44	1 Watt = 30 dBm	

		Average Power Output(dBm)								Required Limit	
CH	Frequency (MHz)	Data Rate									
		6	9	12	18	24	36	48	54		
1	2412	12.90	12.84	12.79	12.75	12.69	12.62	12.57	12.51	1 Watt = 30 dBm	
6	2437	12.98	12.89	12.84	12.79	12.72	12.65	12.60	12.54	1 Watt = 30 dBm	
11	2462	12.91	12.86	12.81	12.78	12.71	12.63	12.59	12.53	1 Watt = 30 dBm	

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**802.11n\_20M**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
1	<b>2412</b>	12.91	12.87	12.81	12.74	12.68	12.62	12.56	12.50	<b>1 Watt = 30 dBm</b>
6	<b>2437</b>	13.02	12.95	12.90	12.84	12.79	12.72	12.66	12.61	<b>1 Watt = 30 dBm</b>
11	<b>2462</b>	<b>13.45</b>	13.39	13.31	13.27	13.22	13.16	13.10	13.05	<b>1 Watt = 30 dBm</b>

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
1	<b>2412</b>	11.96	11.89	11.84	11.80	11.75	11.71	11.67	11.63	<b>1 Watt = 30 dBm</b>
6	<b>2437</b>	12.28	12.24	12.21	12.18	12.14	12.11	12.08	12.05	<b>1 Watt = 30 dBm</b>
11	<b>2462</b>	12.28	12.25	12.22	12.18	12.15	12.12	12.09	12.07	<b>1 Watt = 30 dBm</b>

**802.11n\_20M (MIMO CH0)**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	<b>2412</b>	<b>13.92</b>	13.89	13.85	13.79	13.73	13.68	13.63	13.58	<b>1 Watt = 30 dBm</b>
6	<b>2437</b>	13.84	13.81	13.77	13.71	13.68	13.64	13.59	13.54	<b>1 Watt = 30 dBm</b>
11	<b>2462</b>	13.21	13.18	13.14	13.11	13.08	13.03	12.94	12.87	<b>1 Watt = 30 dBm</b>

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	<b>2412</b>	10.37	10.31	10.28	10.22	10.18	10.14	10.11	10.02	<b>1 Watt = 30 dBm</b>
6	<b>2437</b>	10.40	10.34	10.29	10.24	10.19	10.14	10.12	10.11	<b>1 Watt = 30 dBm</b>
11	<b>2462</b>	10.16	10.14	10.13	10.10	10.08	10.07	10.06	10.05	<b>1 Watt = 30 dBm</b>

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**802.11n\_20M (MIMO CH1)**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2412	13.98	13.94	13.91	13.85	13.79	13.71	13.68	13.61	1 Watt = 30 dBm
6	2437	14.00	13.96	13.92	13.87	13.83	13.73	13.70	13.64	1 Watt = 30 dBm
11	2462	14.49	14.45	14.41	14.37	14.31	14.25	14.19	14.10	1 Watt = 30 dBm

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2412	10.83	10.76	10.68	10.61	10.57	10.51	10.46	10.42	1 Watt = 30 dBm
6	2437	11.35	11.28	11.21	11.16	11.12	11.08	11.05	11.01	1 Watt = 30 dBm
11	2462	11.25	11.20	11.18	11.15	11.11	11.07	11.04	11.02	1 Watt = 30 dBm

**802.11n\_20M (MIMO CH0+CH1)**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2412	16.96	16.93	16.89	16.83	16.77	16.71	16.67	16.61	1 Watt = 30 dBm
6	2437	16.93	16.90	16.86	16.80	16.77	16.70	16.66	16.60	1 Watt = 30 dBm
11	2462	16.91	16.87	16.83	16.80	16.75	16.69	16.62	16.54	1 Watt = 30 dBm

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2412	13.62	13.55	13.49	13.43	13.39	13.34	13.30	13.23	1 Watt = 30 dBm
6	2437	13.91	13.85	13.78	13.73	13.69	13.65	13.62	13.59	1 Watt = 30 dBm
11	2462	13.75	13.71	13.70	13.67	13.64	13.61	13.59	13.57	1 Watt = 30 dBm

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**802.11n\_40M**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
1	2422	13.12	13.08	13.01	12.96	12.91	12.87	12.81	12.75	1 Watt = 30 dBm
6	2437	13.08	13.03	12.97	12.88	12.81	12.78	12.74	12.70	1 Watt = 30 dBm
11	2452	13.28	13.25	13.18	13.11	13.08	13.02	12.94	12.88	1 Watt = 30 dBm

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
1	2422	10.89	10.85	10.81	10.76	10.72	10.69	10.64	10.61	1 Watt = 30 dBm
6	2437	11.38	11.34	11.29	11.25	11.21	11.17	11.13	11.09	1 Watt = 30 dBm
11	2452	11.48	11.43	11.39	11.36	11.33	11.29	11.25	11.21	1 Watt = 30 dBm

**802.11n\_40M (MIMO CH0)**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2422	13.88	13.84	13.79	13.72	13.67	13.61	13.58	13.54	1 Watt = 30 dBm
6	2437	13.85	13.78	13.73	13.68	13.61	13.54	13.50	13.46	1 Watt = 30 dBm
11	2452	13.60	13.54	13.47	13.41	13.35	13.30	13.21	13.18	1 Watt = 30 dBm

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2422	10.41	10.35	10.31	10.28	10.22	10.16	10.12	10.09	1 Watt = 30 dBm
6	2437	10.56	10.48	11.02	10.88	10.71	10.61	10.99	10.38	1 Watt = 30 dBm
11	2452	10.38	10.35	10.34	10.31	10.28	10.24	10.21	10.19	1 Watt = 30 dBm

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**802.11n\_40M (MIMO CH1)**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2422	14.06	14.01	13.97	13.94	13.89	13.82	13.78	13.76	1 Watt = 30 dBm
6	2437	14.01	13.96	13.92	13.89	13.86	13.81	13.78	13.74	1 Watt = 30 dBm
11	2452	14.22	14.18	14.13	14.08	14.00	13.94	13.88	13.81	1 Watt = 30 dBm

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2422	11.02	10.99	10.94	10.91	10.88	10.84	10.81	10.77	1 Watt = 30 dBm
6	2437	11.28	11.24	11.19	11.14	11.09	11.03	10.99	10.94	1 Watt = 30 dBm
11	2452	11.24	11.20	11.16	11.11	11.08	11.01	10.96	10.91	1 Watt = 30 dBm

**802.11n\_40M (MIMO CH0+CH1)**

		Peak Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2422	16.98	16.94	16.89	16.84	16.79	16.73	16.69	16.66	1 Watt = 30 dBm
6	2437	16.94	16.88	16.84	16.80	16.75	16.69	16.65	16.61	1 Watt = 30 dBm
11	2452	16.93	16.88	16.82	16.77	16.70	16.64	16.57	16.52	1 Watt = 30 dBm

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
1	2422	13.74	13.69	13.65	13.62	13.57	13.52	13.49	13.45	1 Watt = 30 dBm
6	2437	13.95	13.89	14.12	14.02	13.91	13.84	14.00	13.68	1 Watt = 30 dBm
11	2452	13.84	13.81	13.78	13.74	13.71	13.65	13.61	13.58	1 Watt = 30 dBm

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\* Note: The duty cycle factor is compensated to obtain the maximum value of measurement in average.

\* Note: Offset =11.25dB for 2.4G 802.11b/g; Offset =14.25dB for 2.4G 802.11n20/n40.

\* Note: Measured by Power Meter

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## 8 6dB BANDWIDTH

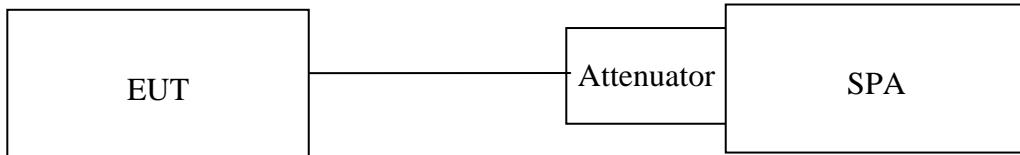
### 8.1 Standard Applicable:

According to §15.247(a)(2), Systems using digital modulation techniques may operate in the 902 - 928 MHz and 2400 - 2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500kHz.

### 8.2 Measurement Equipment Used:

Refer to section 7.2 for the plot.

### 8.3 Test Set-up:



### 8.4 Measurement Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 100 kHz, VBW = 3\*RBW, Span = 30M/50MHz, Detector=Peak, Sweep=auto, the setting on spectrum is adjusted based on the procedure as guide in 8.1 option 1 of KDB558074.
4. Mark the peak frequency and -6dB (upper and lower) frequency.
5. Repeat above procedures until all frequency of interest measured was complete.

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## 8.5 Measurement Result:

### 802.11b

Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Result
2412	10080	> 500	PASS
2437	10080	> 500	PASS
2462	10090	> 500	PASS

### 802.11g

Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Result
2412	16600	> 500	PASS
2437	16610	> 500	PASS
2462	16600	> 500	PASS

### 802.11n\_20M

Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Result
2412	17710	> 500	PASS
2437	17740	> 500	PASS
2462	17720	> 500	PASS

### 802.11n\_40M

Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Result
2422	36380	> 500	PASS
2437	36390	> 500	PASS
2452	36380	> 500	PASS

\* Note: Offset = 11.25dB for 2.4G 802.11b/g; Offset = 14.25dB for 2.4G 802.11n20/n40.

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## 802.11b

### 6dB Band Width Test Data CH-Low



### 6dB Band Width Test Data CH-Mid



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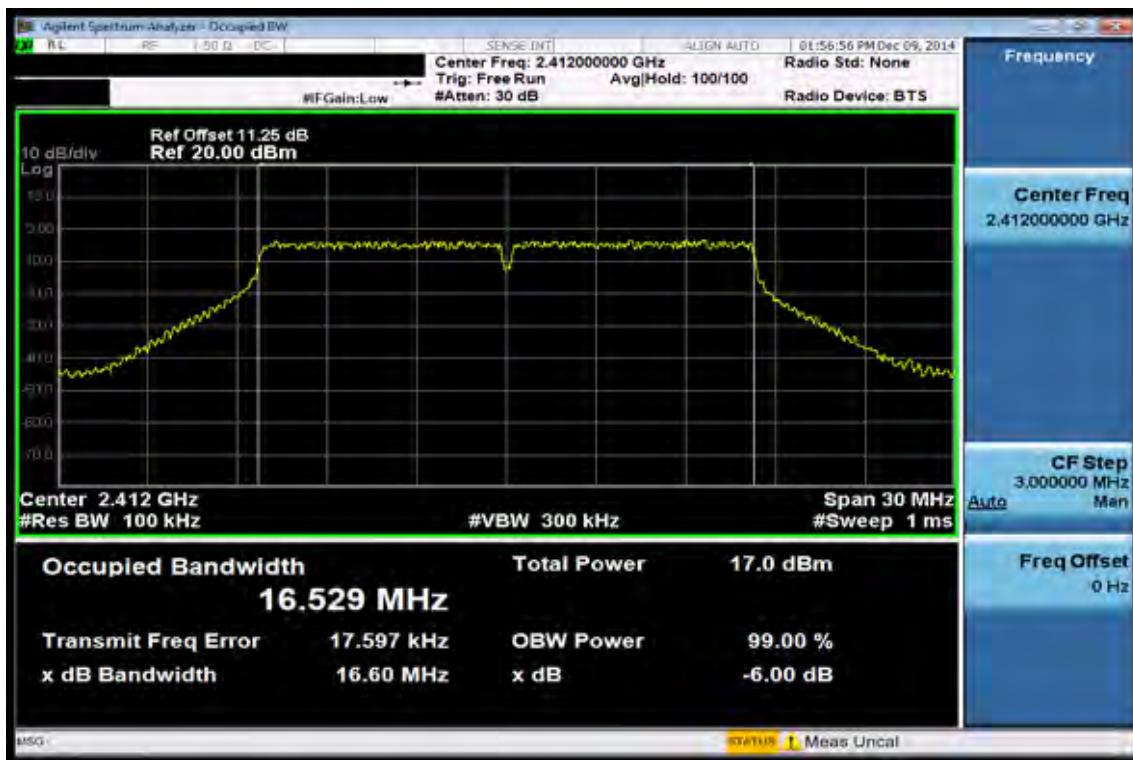
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## 6dB Band Width Test Data CH-High



## 802.11g

## 6dB Band Width Test Data CH-Low

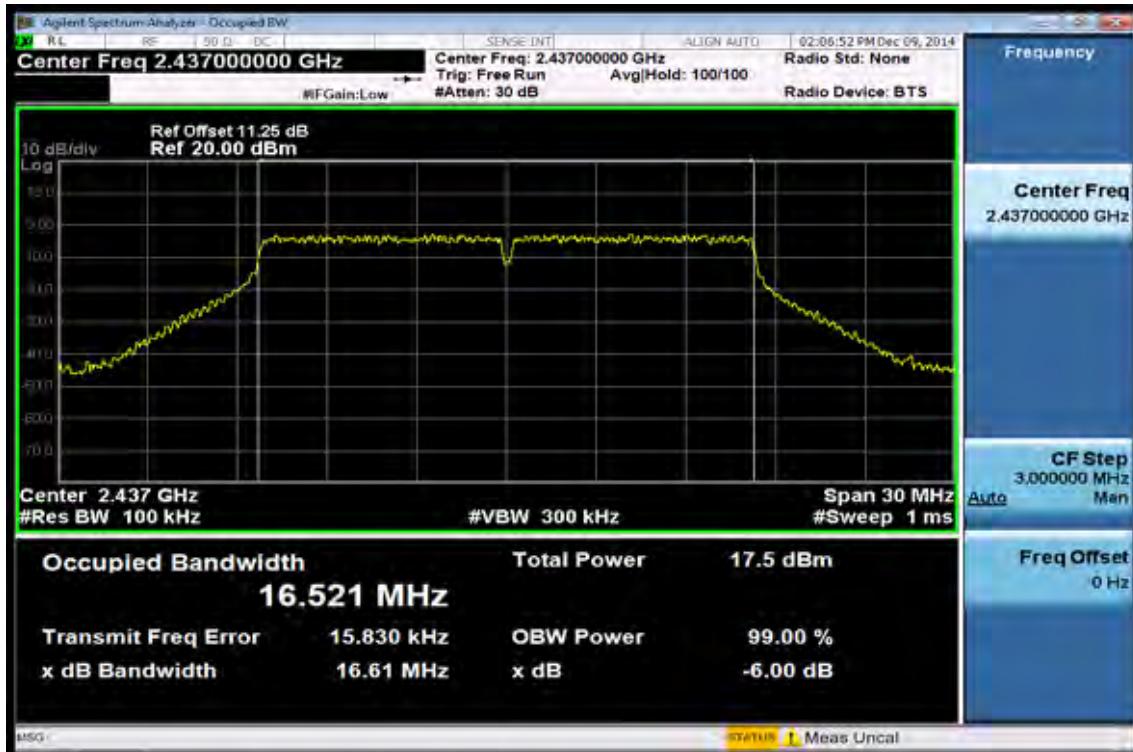


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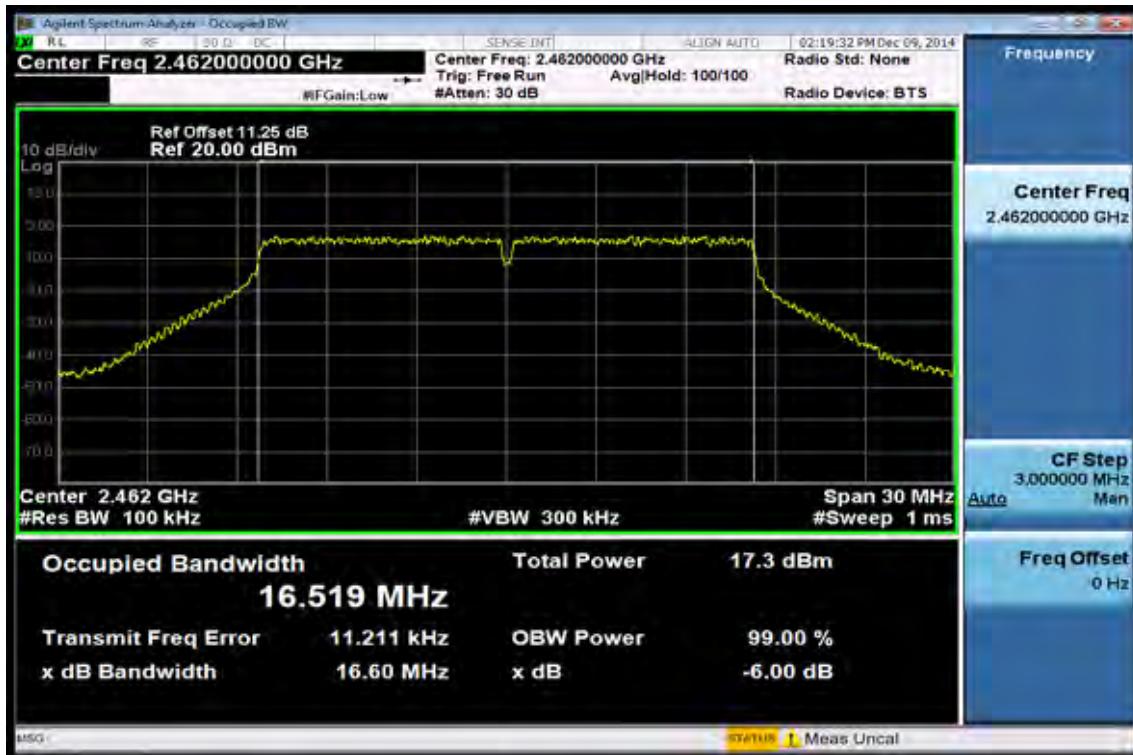
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## 6dB Band Width Test Data CH-Mid



## 6dB Band Width Test Data CH-High



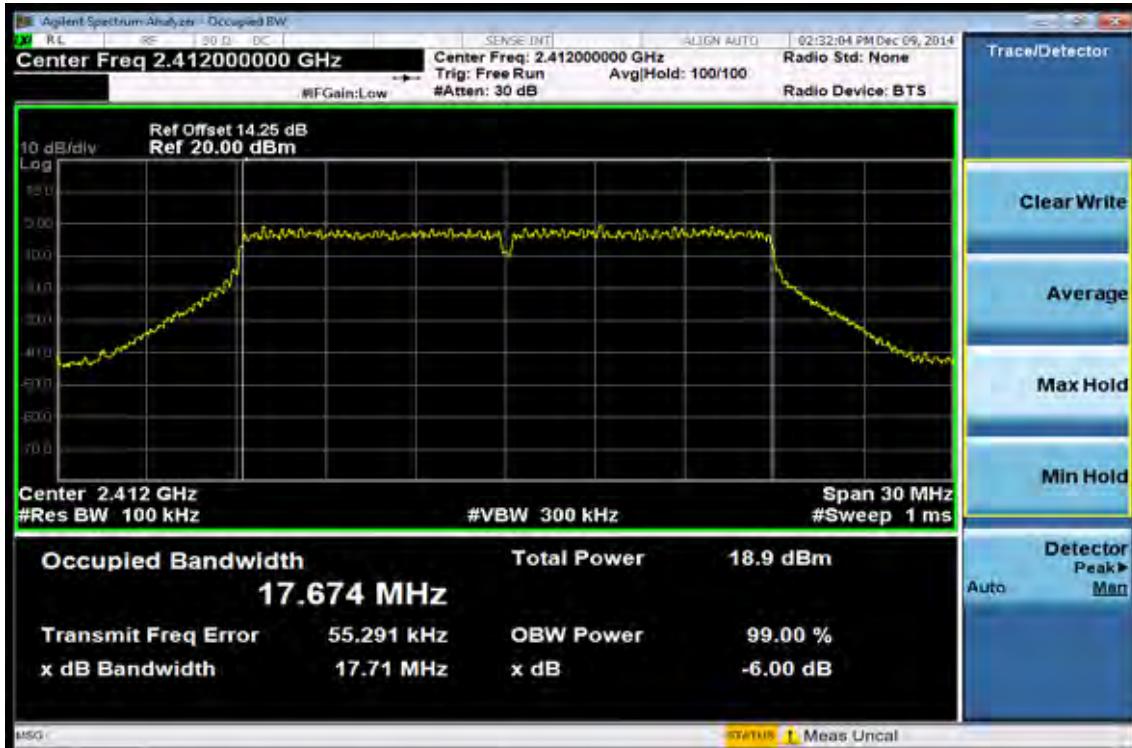
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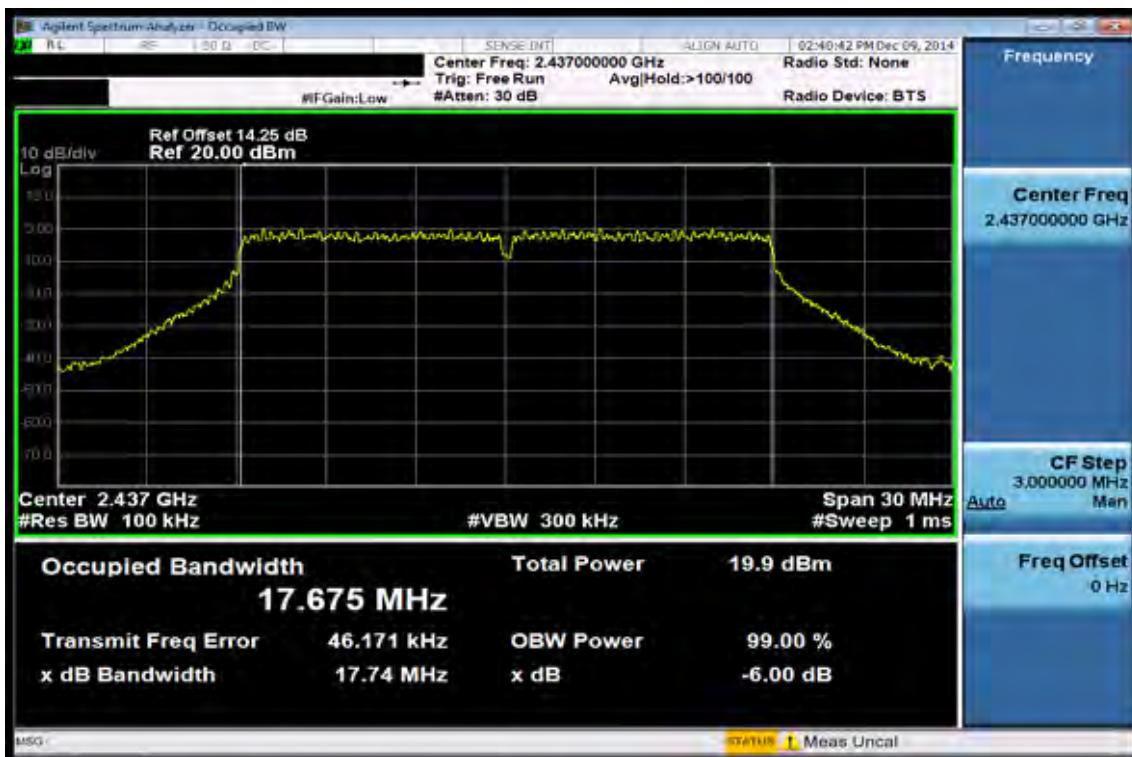
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## 802.11n\_20M

## 6dB Band Width Test Data CH-Low



## 6dB Band Width Test Data CH-Mid



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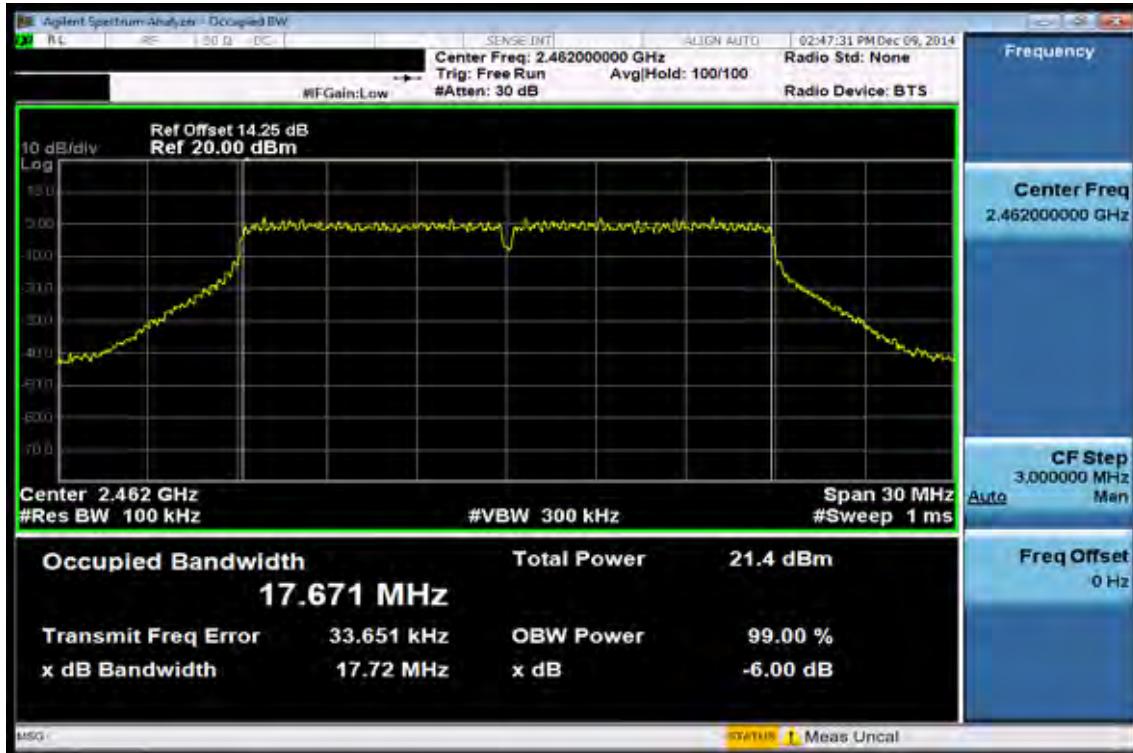
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## 6dB Band Width Test Data CH-High



## 802.11n\_40M

## 6dB Band Width Test Data CH-Low

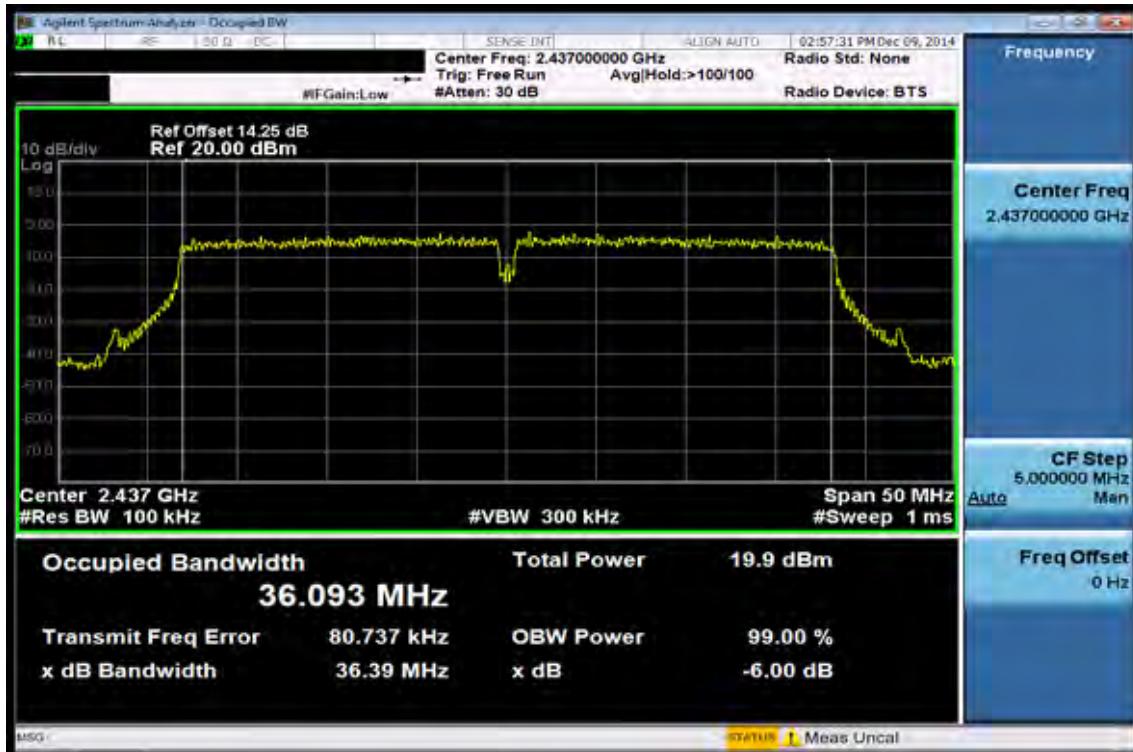


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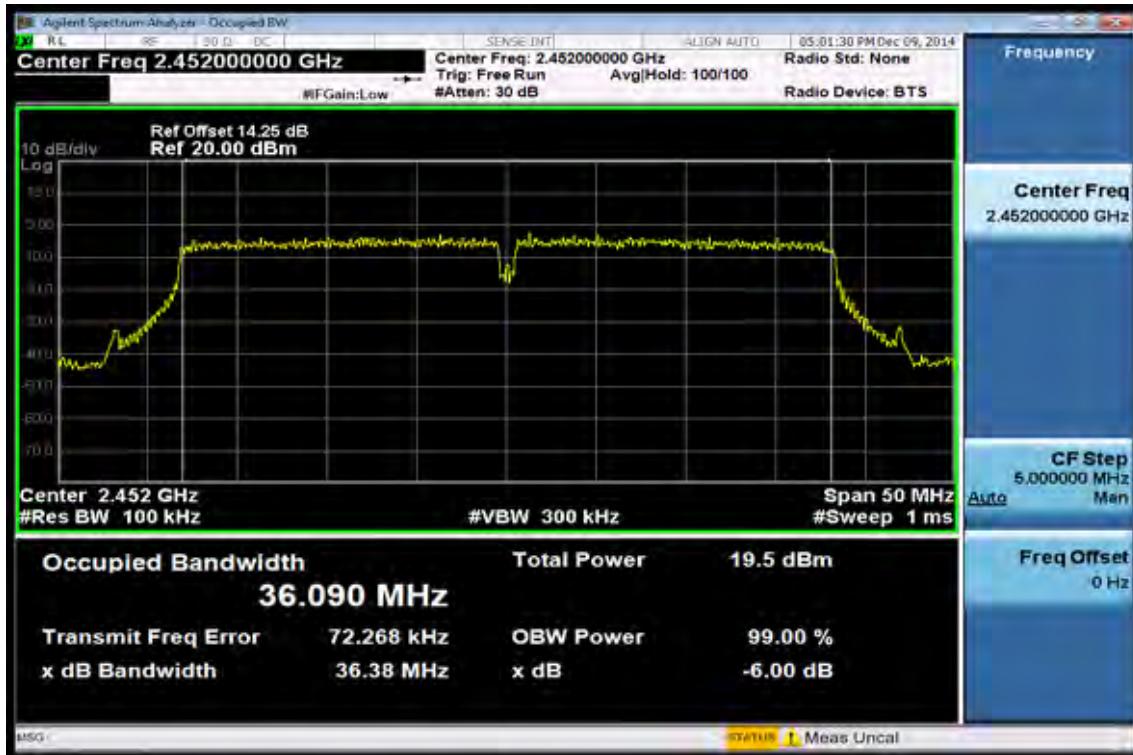
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## 6dB Band Width Test Data CH-Mid



## 6dB Band Width Test Data CH-High



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## 9 BAND EDGES MEASUREMENT

### 9.1 Standard Applicable:

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 9.2 Measurement Equipment Used:

#### 9.2.1 Conducted Emission at antenna port:

Refer to section 7.2 for details.

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### 9.2.2 Radiated emission:

966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESU 40	100363	2014/04/12	2015/04/11
Loop Antenna	ETS-Lindgren	6502	00143303	2014/01/16	2015/01/15
Broadband Antenna	TESEQ	CBL 6112D	35240	2014/01/17	2015/01/16
Horn Antenna	ETS-Lindgren	3117	00143272	2014/01/27	2015/01/26
Horn Antenna	ETS-Lindgren	3160-09	00117911	2014/01/22	2015/01/21
Pre Amplifier	R&S	SCU-18	10204	2014/03/26	2015/03/25
Pre Amplifier	R&S	SCU-26	100780	2014/03/26	2015/03/25
Pre Amplifier	EMC Instruments	EMC330	980096	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	RG 214/U	W21.03	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	RG 214/U	W22.03	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104	MY17413/4	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104	MY17404/4	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104	MY17394/4	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104	MY17386/4	2014/03/26	2015/03/25
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104	MY17388/4	2014/03/26	2015/03/25
Attenuator	WOKEN	218FS-10	HY-151	2014/01/06	2015/01/05
Controller	MF	MF-7802	N/A	N.C.R.	N.C.R.
Antenna Master	MF	N/A	N/A	N.C.R.	N.C.R.
Turn Table	MF	N/A	N/A	N.C.R.	N.C.R.
Site NSA	SGS	966 Chamber C	SAC-C	2014/03/05	2015/03/04
Site VSWR	SGS	966 Chamber C	SAC-C	2014/04/10	2015/04/09
Test Software	World-Pallas	Dr. E	V 3.0 Lite	N.C.R.	N.C.R.

Note: N.C.R refers to Not Calibrated Required.

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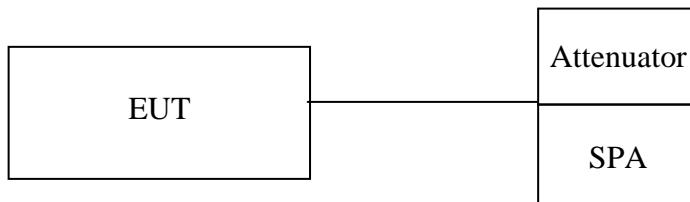
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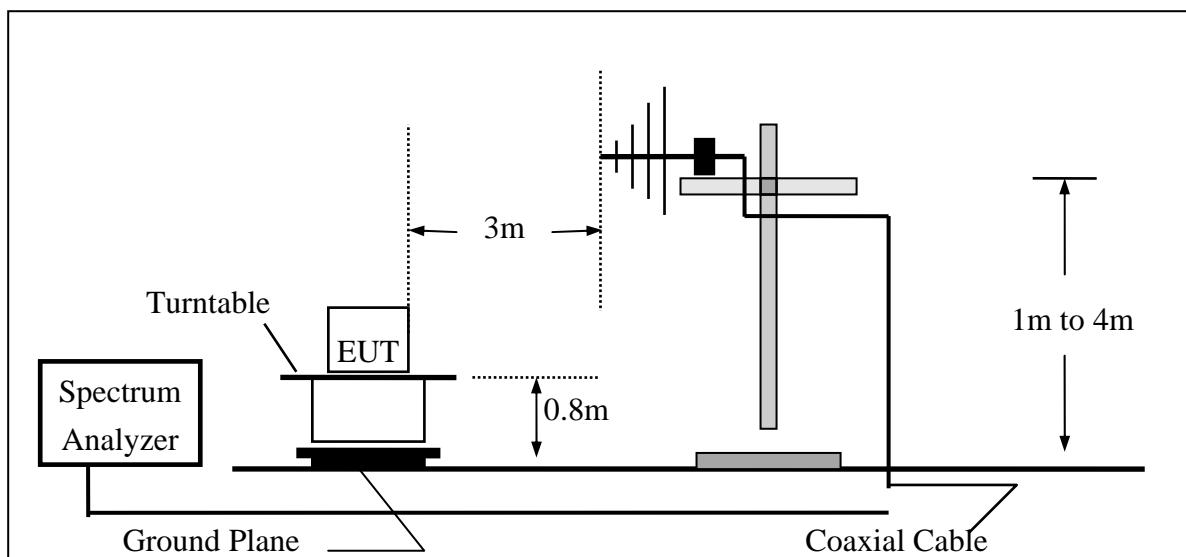
### 9.3 Test SET-UP:

#### 9.3.1 Conducted Emission at antenna port:

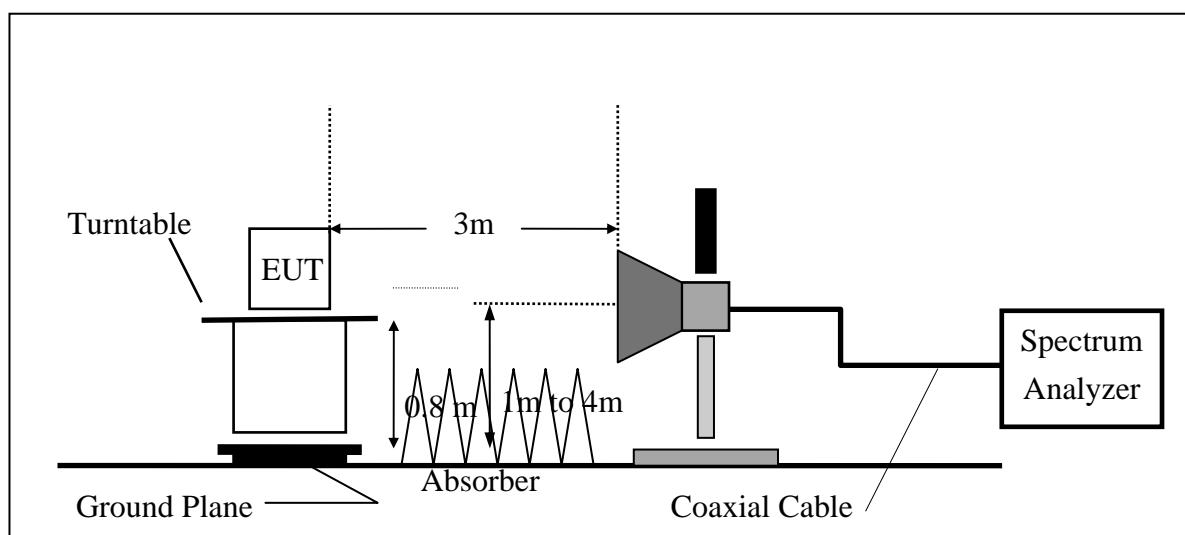


#### 9.3.2 Radiated emission:

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



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#### 9.4 Measurement Procedure:

Unwanted Emissions into Non-Restricted Frequency Bands, Measurement Procedure followed by 11.1 of KDB558074 D01

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set start to edge frequency, and stop frequency of spectrum analyzer so as to encompass the spectrum to be examined.
4. Set the spectrum analyzer as RBW, VBW=300KHz, Detector = Peak, Sweep = auto
5. Mark the highest reading of the emission as the reference level measurement.
6. Set DL as the limit = reading on marker 1 – 20dBm
7. Marker on frequency, 2.3999GHz and 2.4836GHz, and examine shall 100 KHz immediately outside the authorized (2400~2483.5) be attenuated by 20dB at least relative to the maximum emission of power.
8. Repeat above procedures until all default test channel (low, middle, and high) was complete.

Unwanted Emission falling into Restricted Frequency Bands, Measurement Procedure followed by 12.1 of KDB558074:

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. On spectrum, following 8.1.2, and RBW = 1MHz, VBW = 3MHz, & Marker 2390MHz, and 2483.5MHz (Peak Measurement). Average Measurement: following 8.2 with the modification span to 1MHz, & RBW = 1MHz, VBW = 3MHz and peak marker function to obtain the highest reading on 2390, and 2483.5MHz.
8. Repeat above procedures until all default test channel (low, middle, and high) was complete

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## 9.5 Field Strength Calculation:

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$\mathbf{FS = RA + AF - AG}$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

## 9.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

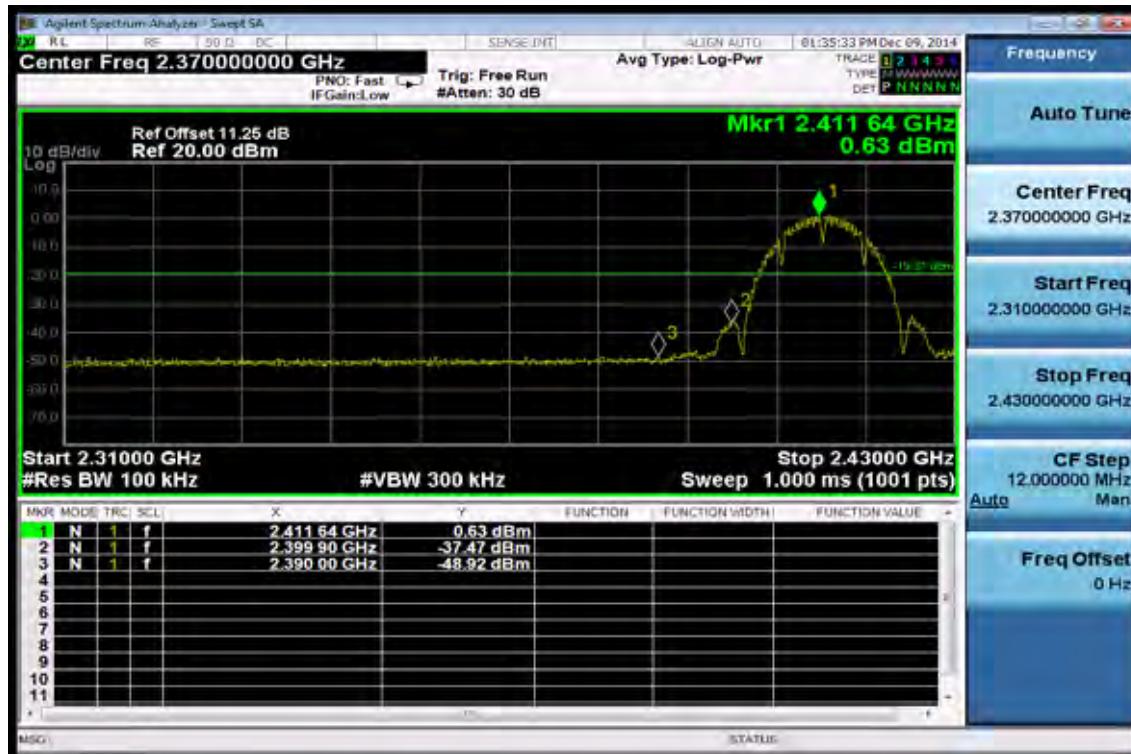
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## 802.11b - Unwanted Emissions into Non-Restricted Frequency Bands

## Band Edges Test Data CH-Low



## Band Edges Test Data CH-High



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### Radiated Emission: (Antenna A)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 b mode

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Mode	Reading Level dB $\mu$ V				
2390.00	E	Peak	48.29	3.14	51.43	74.00	-22.57	
2390.00	E	Average	39.93	3.14	43.07	54.00	-10.93	

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Mode	Reading Level dB $\mu$ V				
2390.00	E	Peak	43.45	3.14	46.59	74.00	-27.41	
2390.00	E	Average	32.50	3.14	35.64	54.00	-18.36	

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Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	50.15	3.35	53.50	74.00	-20.50	
2483.50	E	Average	38.27	3.35	41.62	54.00	-12.38	

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	43.60	3.35	46.96	74.00	-27.04	
2483.50	E	Average	32.55	3.35	35.90	54.00	-18.10	

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### Radiated Emission: (Antenna B)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 b mode

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2346.72	S	Peak	50.71	3.00	53.71	74.00	-20.29
2346.72	S	Average	33.44	3.00	36.44	54.00	-17.56
2390.00	E	Peak	48.49	3.14	51.63	74.00	-22.37
2390.00	E	Average	35.38	3.14	38.52	54.00	-15.48

Operation Band :802.11 b

ARFCN	:CH 01	Test Date	:2014-12-12
Fundamental Frequency	:2412 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2364.60	S	Peak	46.79	3.06	49.85	74.00	-24.15
2364.60	S	Average	32.09	3.06	35.15	54.00	-18.85
2390.00	E	Peak	44.31	3.14	47.44	74.00	-26.56
2390.00	E	Average	32.85	3.14	35.99	54.00	-18.01

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Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	48.98	3.35	52.33	74.00	-21.67
2483.50	E	Average	36.02	3.35	39.37	54.00	-14.63

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	44.55	3.35	47.91	74.00	-26.09
2483.50	E	Average	32.80	3.35	36.15	54.00	-17.85

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### Radiated Emission: (Antenna C)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 b mode

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Mode	Reading Level dB $\mu$ V				
2390.00	E	Peak	47.62	3.14	50.75	74.00	-23.25	
2390.00	E	Average	35.35	3.14	38.49	54.00	-15.51	

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Mode	Reading Level dB $\mu$ V				
2390.00	E	Peak	48.83	3.14	51.97	74.00	-22.03	
2390.00	E	Average	37.15	3.14	40.29	54.00	-13.71	

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Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	47.55	3.35	50.91	74.00	-23.09
2483.50	E	Average	35.38	3.35	38.73	54.00	-15.27

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	47.98	3.35	51.34	74.00	-22.66
2483.50	E	Average	37.19	3.35	40.54	54.00	-13.46

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### Radiated Emission: (Antenna D)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 b mode

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Peak	dB $\mu$ V				
2390.00	E	Peak	42.70	3.14	45.84	74.00	-28.16	
2390.00	E	Average	31.70	3.14	34.84	54.00	-19.16	

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Peak	dB $\mu$ V				
2390.00	E	Peak	42.40	3.14	45.54	74.00	-28.46	
2390.00	E	Average	31.73	3.14	34.87	54.00	-19.13	

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Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	43.36	3.35	46.72	74.00	-27.28
2483.50	E	Average	32.07	3.35	35.42	54.00	-18.58

Operation Band	:802.11 b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	43.33	3.35	46.68	74.00	-27.32
2483.50	E	Average	31.98	3.35	35.33	54.00	-18.67

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## 802.11g - Unwanted Emissions into Non-Restricted Frequency Bands

## Band Edges Test Data CH-Low



## Band Edges Test Data CH-High



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### Radiated Emission: (Antenna A)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 g mode

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	53.19	3.14	56.33	74.00	-17.67	
2390.00	E	Average	38.81	3.14	41.95	54.00	-12.05	

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	46.79	3.14	49.93	74.00	-24.07	
2390.00	E	Average	33.50	3.14	36.64	54.00	-17.36	

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	55.20	3.35	58.55	74.00	-15.45	
2483.50	E	Average	40.80	3.35	44.15	54.00	-9.85	

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	45.15	3.35	48.51	74.00	-25.49	
2483.50	E	Average	33.46	3.35	36.81	54.00	-17.19	

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### Radiated Emission: (Antenna B)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 g mode

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual	Limit @3m	Safe Margin
					FS dB $\mu$ V/m	dB $\mu$ V/m	dB
2389.08	S	Peak	58.95	3.14	62.09	74.00	-11.91
2389.08	S	Average	36.78	3.14	39.92	54.00	-14.08
2390.00	E	Peak	58.05	3.14	61.18	74.00	-12.82
2390.00	E	Average	37.54	3.14	40.68	54.00	-13.32

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual	Limit @3m	Safe Margin
					FS dB $\mu$ V/m	dB $\mu$ V/m	dB
2389.32	S	Peak	53.32	3.14	56.46	74.00	-17.54
2389.32	S	Average	33.91	3.14	37.05	54.00	-16.95
2390.00	E	Peak	52.72	3.14	55.86	74.00	-18.14
2390.00	E	Average	34.03	3.14	37.17	54.00	-16.83

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	56.81	3.35	60.16	74.00	-13.84	
2483.50	E	Average	37.70	3.35	41.05	54.00	-12.95	

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	50.44	3.35	53.80	74.00	-20.20	
2483.50	E	Average	33.80	3.35	37.15	54.00	-16.85	

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**Radiated Emission: (Antenna C)**

(Unwanted Emissions into Restricted Frequency Bands): 802.11 g mode

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	47.53	3.14	50.67	74.00	-23.33	
2390.00	E	Average	35.43	3.14	38.57	54.00	-15.43	

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	52.22	3.14	55.36	74.00	-18.64	
2390.00	E	Average	37.92	3.14	41.06	54.00	-12.94	

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	47.54	3.35	50.89	74.00	-23.11	
2483.50	E	Average	35.71	3.35	39.06	54.00	-14.94	

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	51.61	3.35	54.96	74.00	-19.04	
2483.50	E	Average	37.88	3.35	41.23	54.00	-12.77	

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### Radiated Emission: (Antenna D)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 g mode

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	45.72	3.14	48.85	74.00	-25.15	
2390.00	E	Average	32.46	3.14	35.60	54.00	-18.40	

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	47.04	3.14	50.18	74.00	-23.82	
2390.00	E	Average	32.73	3.14	35.87	54.00	-18.13	

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	46.80	3.35	50.16	74.00	-23.84
2483.50	E	Average	32.82	3.35	36.17	54.00	-17.83

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2483.50	E	Peak	48.28	3.35	51.63	74.00	-22.37
2483.50	E	Average	33.79	3.35	37.14	54.00	-16.86

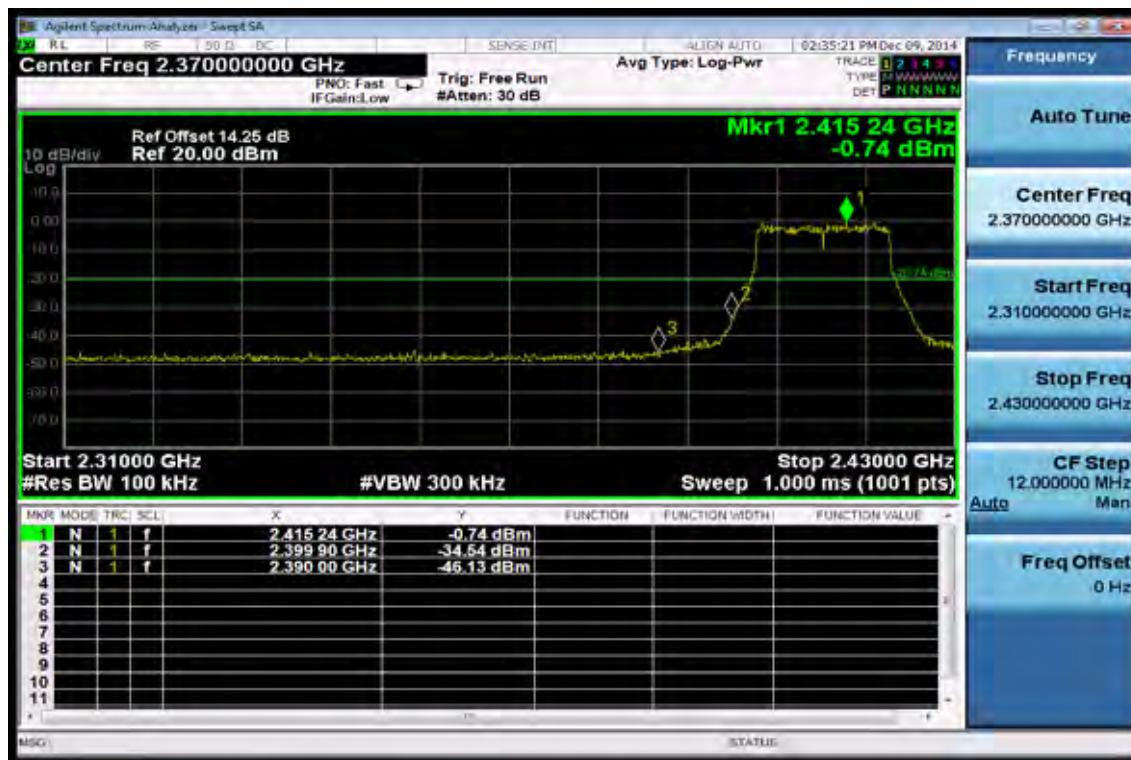
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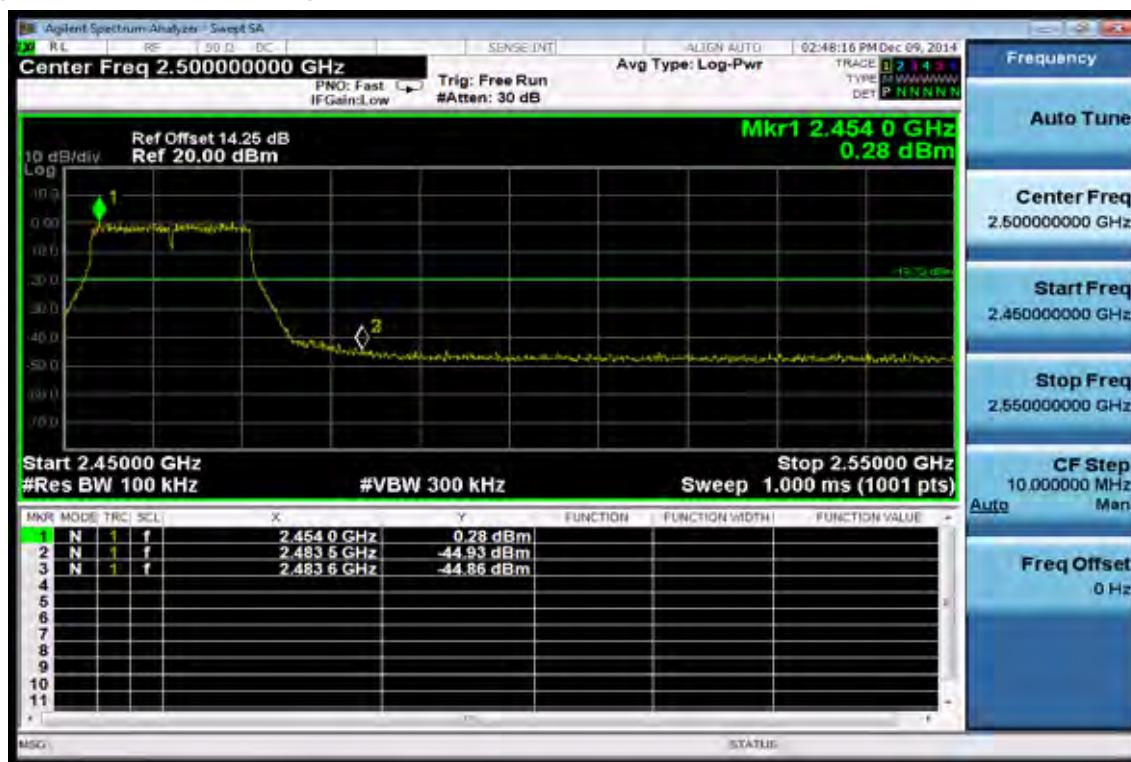
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## 802.11n\_20M- Unwanted Emissions into Non-Restricted Frequency Bands

## Band Edges Test Data CH-Low



## Band Edges Test Data CH-High



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### Radiated Emission: (Antenna A)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_20M mode

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	55.07	3.14	58.21	74.00	-15.79	
2390.00	E	Average	39.16	3.14	42.30	54.00	-11.70	

Operation Band :802.11 n20M

ARFCN	:CH 01	Test Date	:2014-12-12
Fundamental Frequency	:2412 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	45.75	3.14	48.89	74.00	-25.11	
2390.00	E	Average	33.45	3.14	36.59	54.00	-17.41	

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	54.94	3.35	58.29	74.00	-15.71	
2483.50	E	Average	40.52	3.35	43.87	54.00	-10.13	

Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	45.09	3.35	48.45	74.00	-25.55	
2483.50	E	Average	33.28	3.35	36.63	54.00	-17.37	

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## Radiated Emission: (Antenna B)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_20M mode

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			dB $\mu$ V					
2390.00	E	Peak	49.57	3.14	52.71	74.00	-21.29	
2390.00	E	Average	36.19	3.14	39.33	54.00	-14.67	

Operation Band :802.11 n20M

ARFCN	:CH 01	Test Date	:2014-12-12
Fundamental Frequency	:2412 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			dB $\mu$ V					
2390.00	E	Peak	44.47	3.14	47.61	74.00	-26.39	
2390.00	E	Average	32.91	3.14	36.05	54.00	-17.95	

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Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	51.26	3.35	54.62	74.00	-19.38	
2483.50	E	Average	36.71	3.35	40.06	54.00	-13.94	

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq.	Note	Detector	Spectrum		Factor	Actual	Limit	Safe
			Mode	Reading Level				
MHz	F/H/E/S	PK/QP/AV	dB $\mu$ V	dB	dB $\mu$ V/m	dB $\mu$ V/m	dB	
2483.50	E	Peak	43.84	3.35	47.20	74.00	-26.80	
2483.50	E	Average	32.74	3.35	36.09	54.00	-17.91	

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### Radiated Emission: (Antenna C)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_20M mode

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	48.26	3.14	51.40	74.00	-22.60	
2390.00	E	Average	36.37	3.14	39.51	54.00	-14.49	

Operation Band :802.11 n20M

ARFCN	:CH 01	Test Date	:2014-12-12
Fundamental Frequency	:2412 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			Reading Level dB $\mu$ V	Factor dB				
2390.00	E	Peak	47.91	3.14	51.05	74.00	-22.95	
2390.00	E	Average	36.47	3.14	39.61	54.00	-14.39	

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Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual	Limit	Safe
					FS dB $\mu$ V/m	@3m dB $\mu$ V/m	Margin dB
2483.50	E	Peak	48.84	3.35	52.20	74.00	-21.80
2483.50	E	Average	37.31	3.35	40.66	54.00	-13.34

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:Band Edge HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual	Limit	Safe
					FS dB $\mu$ V/m	@3m dB $\mu$ V/m	Margin dB
2483.50	E	Peak	48.48	3.35	51.83	74.00	-22.17
2483.50	E	Average	37.22	3.35	40.57	54.00	-13.43

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### Radiated Emission: (Antenna D)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_20M mode

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			PK/QP/AV	Reading Level dB $\mu$ V				
2388.24	S	Peak	46.09	3.13	49.22	74.00	-24.78	
2388.24	S	Average	32.32	3.13	35.45	54.00	-18.55	
2390.00	E	Peak	44.18	3.14	47.31	74.00	-26.69	
2390.00	E	Average	32.25	3.14	35.39	54.00	-18.61	

Operation Band :802.11 n20M

ARFCN	:CH 01	Test Date	:2014-12-12
Fundamental Frequency	:2412 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
			PK/QP/AV	Reading Level dB $\mu$ V				
2388.84	S	Peak	46.19	3.13	49.32	74.00	-24.68	
2388.84	S	Average	32.30	3.13	35.43	54.00	-18.57	
2390.00	E	Peak	44.95	3.14	48.09	74.00	-25.91	
2390.00	E	Average	32.47	3.14	35.61	54.00	-18.39	

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level	Factor dB	Actual	Limit	Safe
					FS dB $\mu$ V/m	@3m dB $\mu$ V/m	Margin dB
2483.50	E	Peak	45.95	3.35	49.30	74.00	-24.70
2483.50	E	Average	32.77	3.35	36.12	54.00	-17.88

Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level	Factor dB	Actual	Limit	Safe
					FS dB $\mu$ V/m	@3m dB $\mu$ V/m	Margin dB
2483.50	E	Peak	47.23	3.35	50.59	74.00	-23.41
2483.50	E	Average	33.32	3.35	36.67	54.00	-17.33

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## 802.11n\_40M - Unwanted Emissions into Non-Restricted Frequency Bands

## Band Edges Test Data CH-Low



## Band Edges Test Data CH-High



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### Radiated Emission: (Antenna A)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_40M mode

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2390.00	E	Peak	54.96	3.14	58.10	74.00	-15.90
2390.00	E	Average	42.11	3.14	45.25	54.00	-8.75

Operation Band :802.11 n40M

ARFCN	:CH 03	Test Date	:2014-12-12
Fundamental Frequency	:2422 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2390.00	E	Peak	46.14	3.14	49.27	74.00	-24.73
2390.00	E	Average	34.43	3.14	37.57	54.00	-16.43

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Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	56.09	3.35	59.44	74.00	-14.56
2483.50	E	Average	41.82	3.35	45.17	54.00	-8.83

Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	46.53	3.35	49.88	74.00	-24.12
2483.50	E	Average	34.17	3.35	37.52	54.00	-16.48

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### Radiated Emission: (Antenna B)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_40M mode

Operation Band :802.11 n40M  
ARFCN :CH 03 Test Date :2014-12-12  
Fundamental Frequency :2422 MHz Temp./Humi. :20 deg\_C/73 RH  
Operation Mode :Band Edge LOW Engineer :Tai  
EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						PK/QP/AV	dB $\mu$ V
2386.68	S	Peak	51.67	3.13	54.80	74.00	-19.21
2386.68	S	Average	35.78	3.13	38.91	54.00	-15.09
2390.00	E	Peak	50.38	3.14	53.52	74.00	-20.48
2390.00	S	Average	36.40	3.14	39.54	54.00	-14.46

Operation Band :802.11 n40M

ARFCN :CH 03 Test Date :2014-12-12  
Fundamental Frequency :2422 MHz Temp./Humi. :20 deg\_C/73 RH  
Operation Mode :Band Edge LOW Engineer :Tai  
EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						PK/QP/AV	dB $\mu$ V
2390.00	E	Peak	46.08	3.14	49.22	74.00	-24.78
2390.00	E	Average	33.55	3.14	36.69	54.00	-17.31

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Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	50.45	3.35	53.81	74.00	-20.19
2483.50	E	Average	36.81	3.35	40.16	54.00	-13.84

Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	45.01	3.35	48.37	74.00	-25.63
2483.50	E	Average	33.06	3.35	36.41	54.00	-17.59

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**Radiated Emission: (Antenna C)**

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_40M mode

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2390.00	E	Peak	48.75	3.14	51.89	74.00	-22.11
2390.00	E	Average	37.19	3.14	40.33	54.00	-13.67

Operation Band :802.11 n40M

ARFCN	:CH 03	Test Date	:2014-12-12
Fundamental Frequency	:2422 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2390.00	E	Peak	48.48	3.14	51.62	74.00	-22.38
2390.00	E	Average	36.74	3.14	39.88	54.00	-14.12

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Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	49.08	3.35	52.43	74.00	-21.57
2483.50	E	Average	38.10	3.35	41.45	54.00	-12.55

Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	48.67	3.35	52.02	74.00	-21.98
2483.50	E	Average	37.93	3.35	41.28	54.00	-12.72

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### Radiated Emission: (Antenna D)

(Unwanted Emissions into Restricted Frequency Bands): 802.11 n\_40M mode

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:Band Edge LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2390.00	E	Peak	45.11	3.14	48.25	74.00	-25.75
2390.00	E	Average	33.01	3.14	36.15	54.00	-17.85

Operation Band :802.11 n40M

ARFCN	:CH 03	Test Date	:2014-12-12
Fundamental Frequency	:2422 MHz	Temp./Humi.	:20 deg_C/73 RH
Operation Mode	:Band Edge LOW	Engineer	:Tai
EUT Pol.	:H Plane	Measurement Antenna Pol.	:HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
2390.00	E	Peak	45.39	3.14	48.53	74.00	-25.47
2390.00	E	Average	33.11	3.14	36.25	54.00	-17.75

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Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	46.00	3.35	49.35	74.00	-24.65
2483.50	E	Average	33.37	3.35	36.72	54.00	-17.28

Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :Band Edge HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Safe Margin dB
						Factor dB	Actual FS dB $\mu$ V/m
2483.50	E	Peak	47.95	3.35	51.31	74.00	-22.69
2483.50	E	Average	34.59	3.35	37.94	54.00	-16.06

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## 10 SPURIOUS EMISSION TEST

### 10.1 Standard Applicable

According to §15.247(d),

Emission at antenna port:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

### Radiated Spurious Emission

Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

And according to §15.33(a) (1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

### 10.2 Measurement Equipment Used:

#### 10.2.1 Conducted Emission at antenna port:

Refer to section 7.2 for details.

#### 10.2.2 Radiated emission:

Refer to section 9.2.2 for details.

### 10.3 Test SET-UP:

#### 10.3.1 Conducted Emission at antenna port:

Refer to section 7.3 for details.

#### 10.3.2 Radiated emission:

Refer to section 9.3.2 for details.

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## 10.4 Measurement Procedure:

### Radiated Emission:

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. On spectrum, change spectrum mode in linear display mode, and reduce VBW = 10Hz if average reading is measured.
7. Repeat above procedures until all default test channel measured were complete.

### Conducted Emission:

1. To connect Antenna Port of EUT to Spectrum.
2. Set RBW = 100K & VBW = 300K on Spectrum.
3. Sweep the frequency to determine spurious emission as seen on spectrum from span of 30 to 3G, 3G to 8G, 8G to 13G, 13G to 18G and 18G to 26.5GHz, 18G to 40GHz (applicable if operation mode is 5GHz)
4. Via Software, combine 5 spans of frequency range into one plot
5. Repeat above procedures until all default test channel measured were complete.

## 10.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$\mathbf{FS = RA + AF + CL - AG}$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

## 10.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

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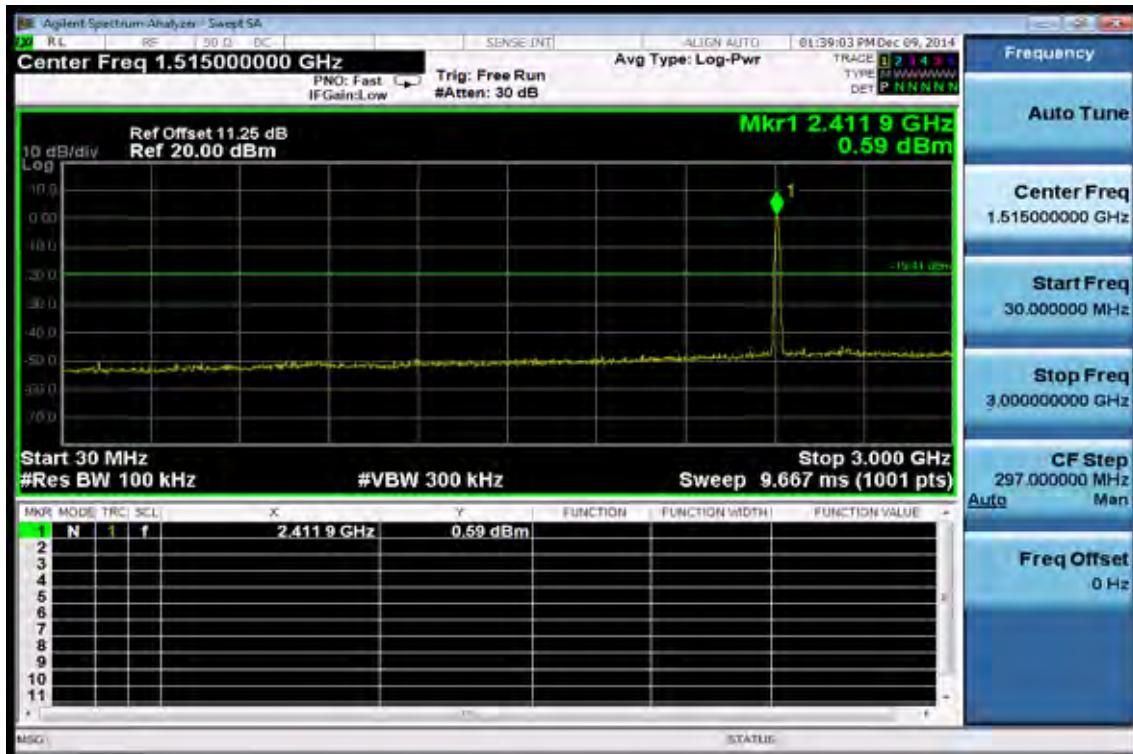
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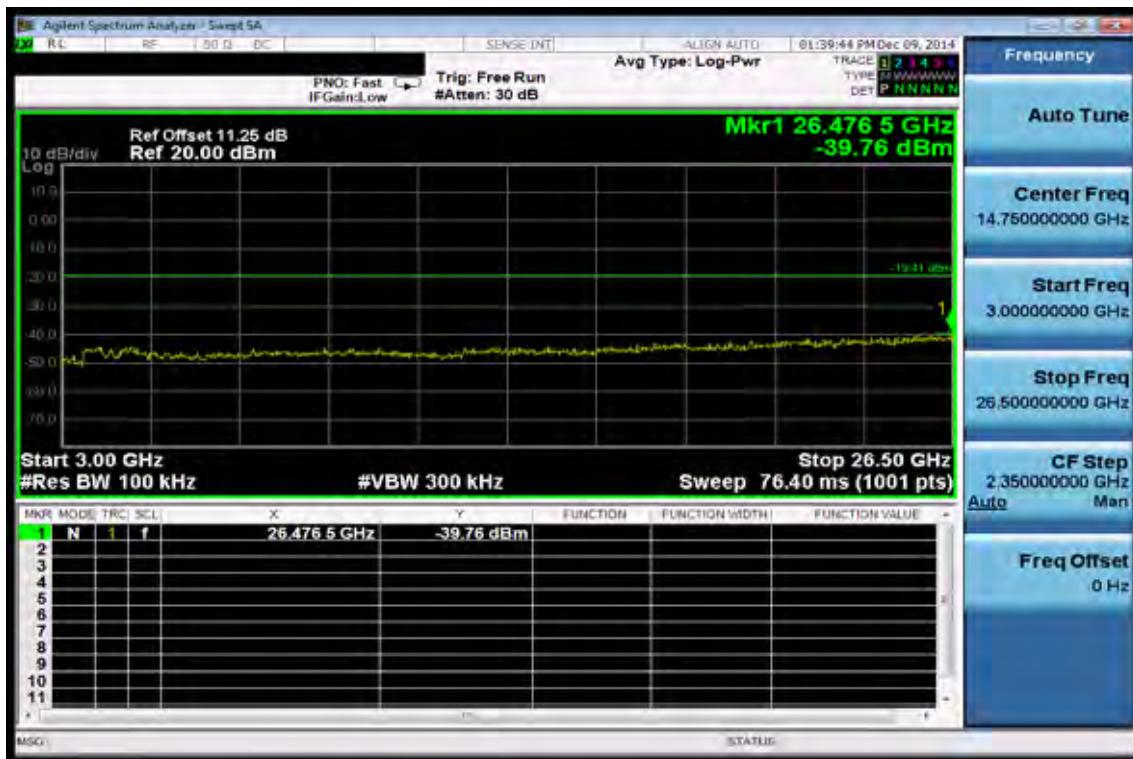
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## Conducted Spurious Emission Measurement Result (802.11b)

### Ch Low 30MHz – 3GHz



### Ch Low 3GHz – 26.5GHz



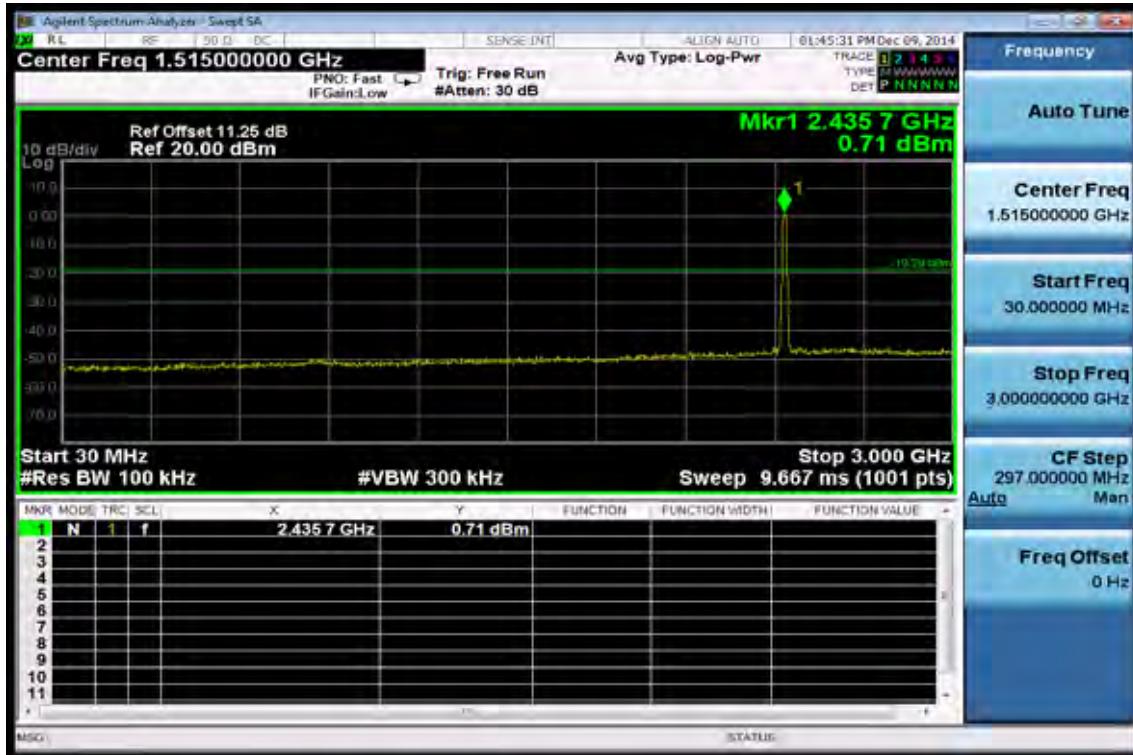
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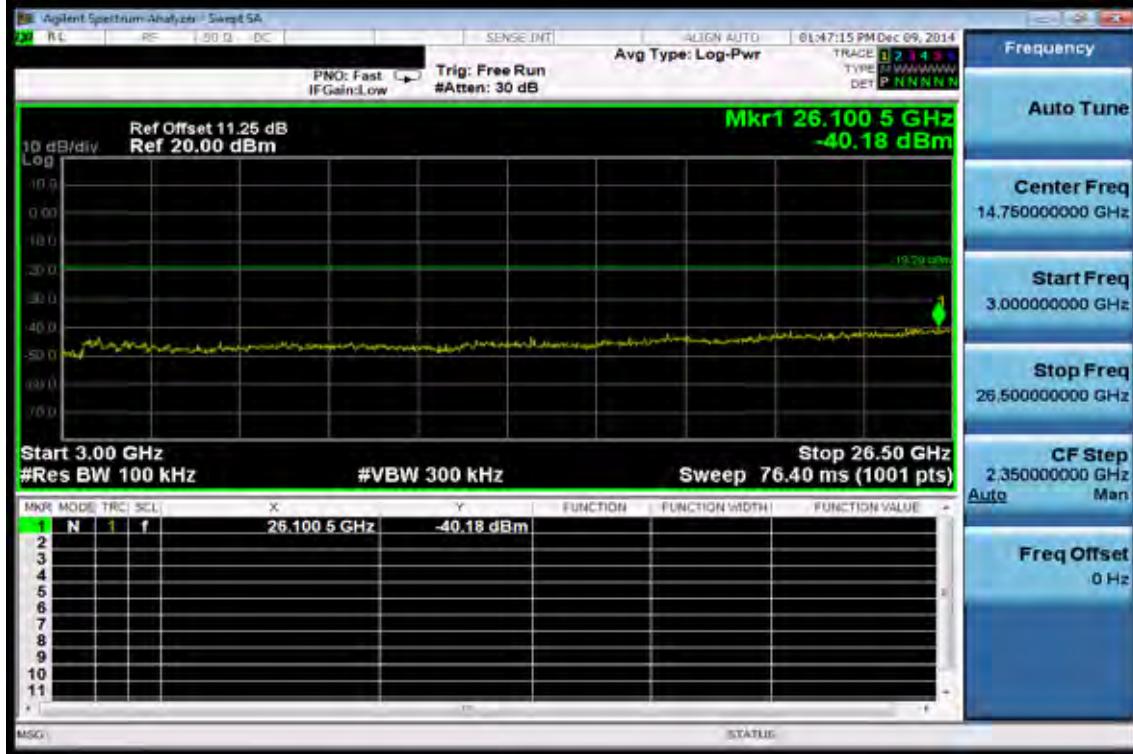
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## Ch Mid 30MHz – 3GHz



## Ch Mid 3GHz – 26.5GHz



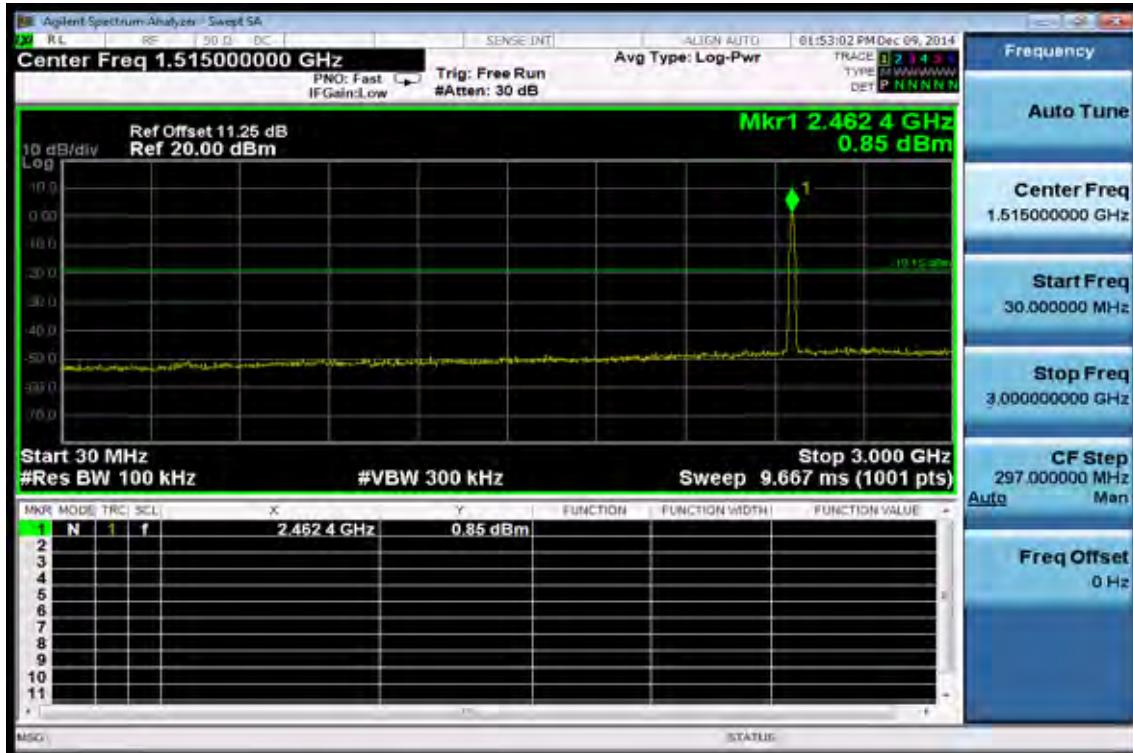
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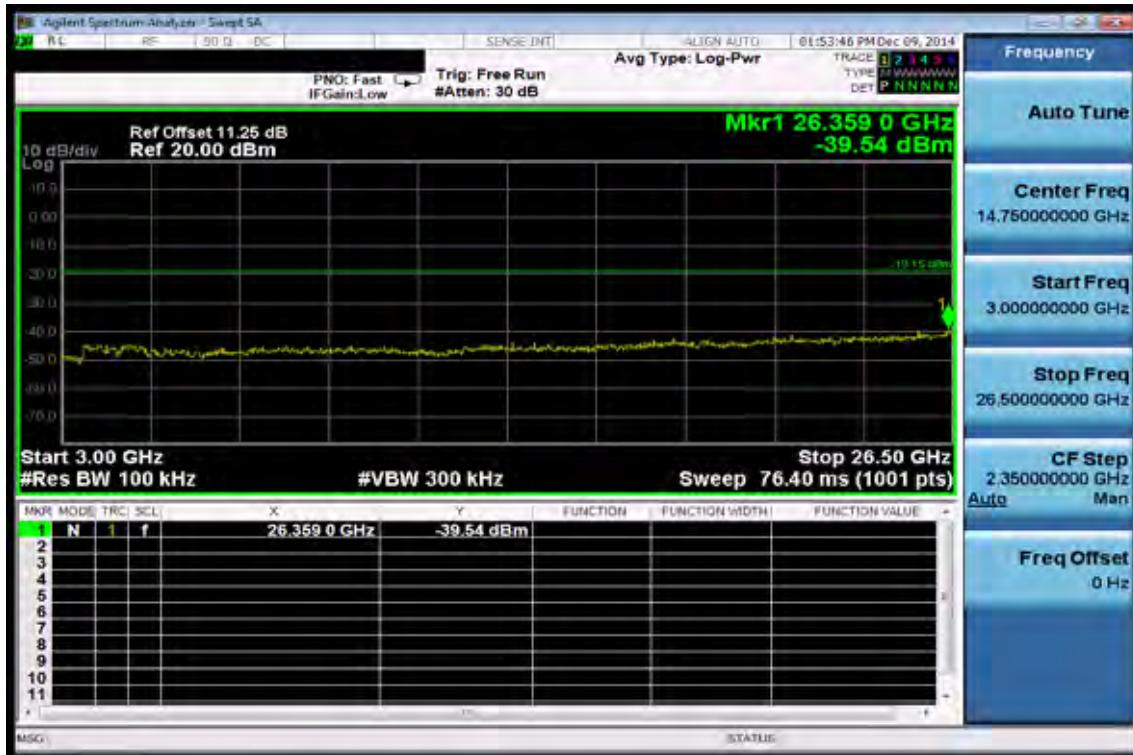
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## Ch High 30MHz – 3GHz



## Ch High 3GHz – 26.5GHz



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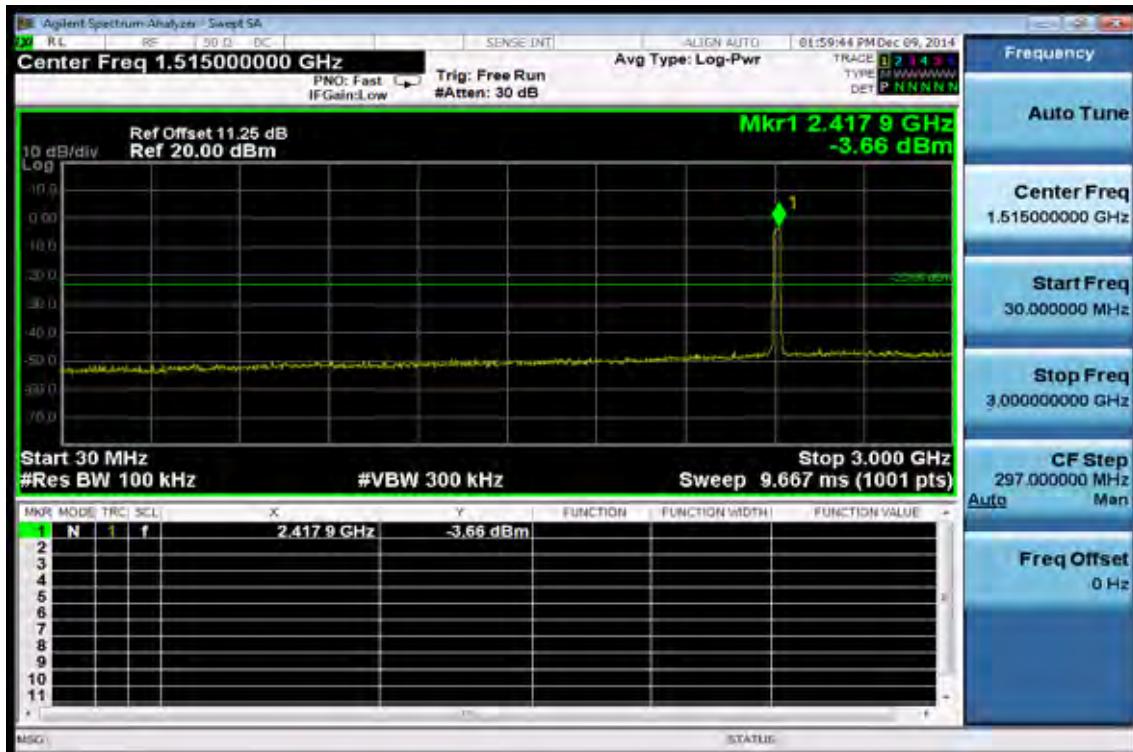
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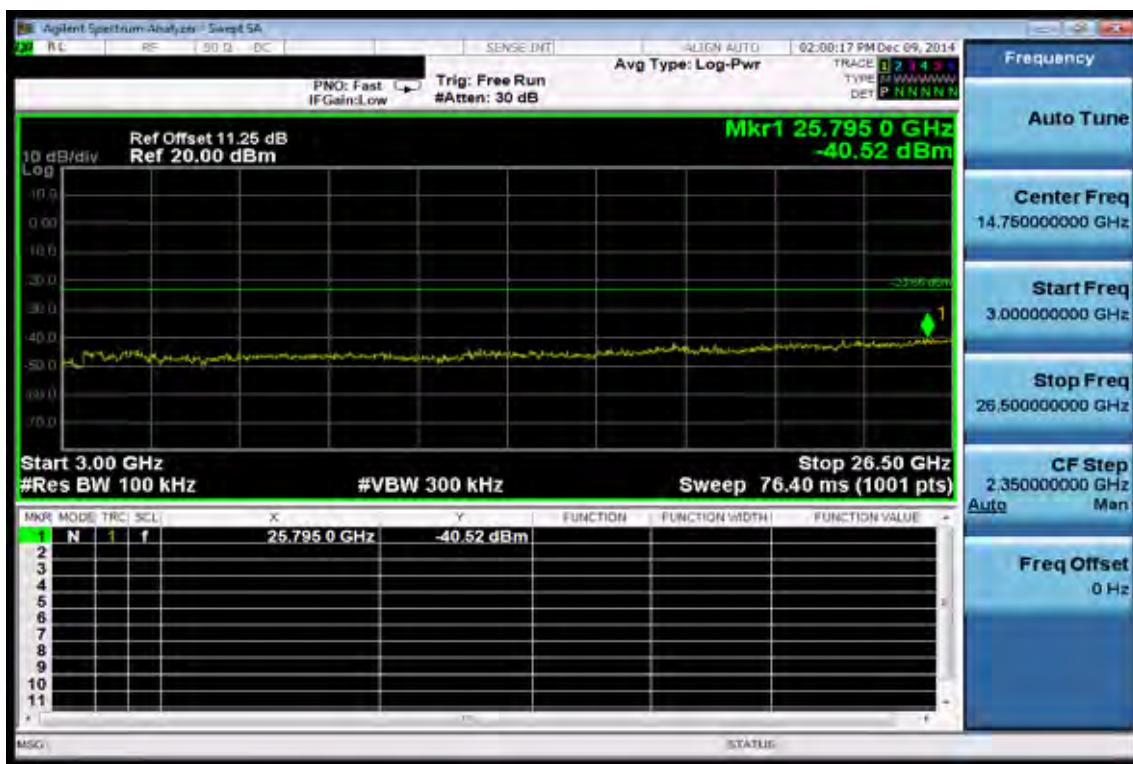
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## Conducted Spurious Emission Measurement Result (802.11g)

## Ch Low 30MHz – 3GHz



## Ch Low 3GHz – 26.5GHz



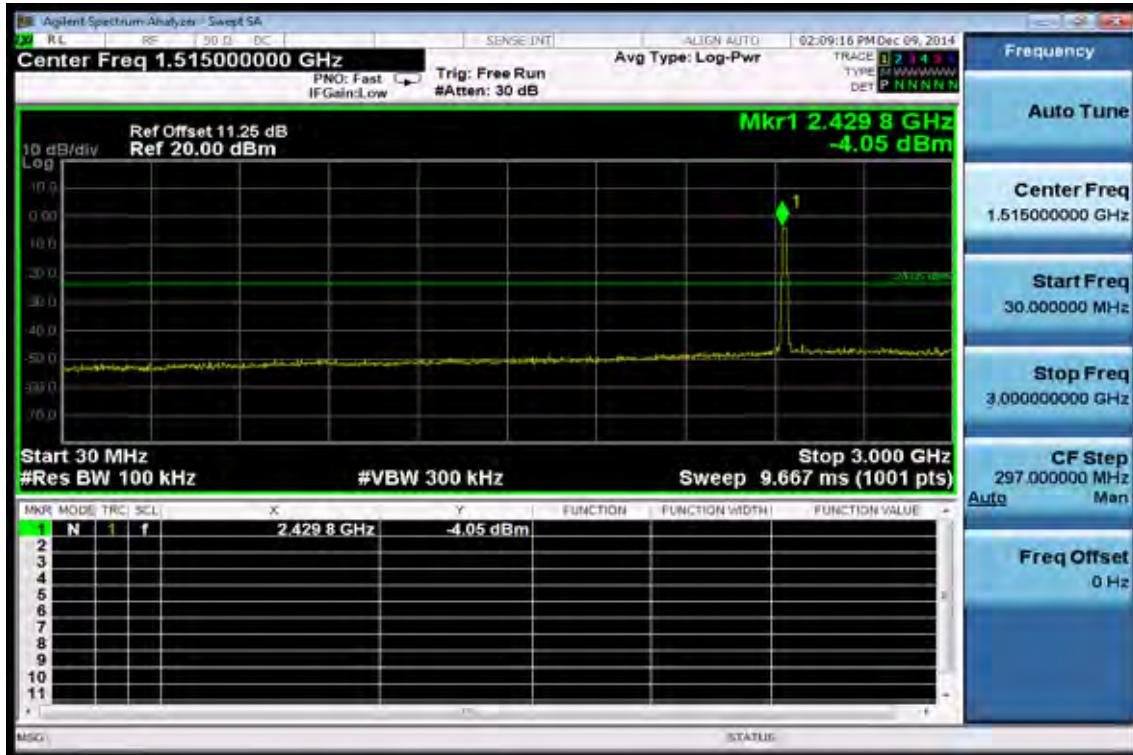
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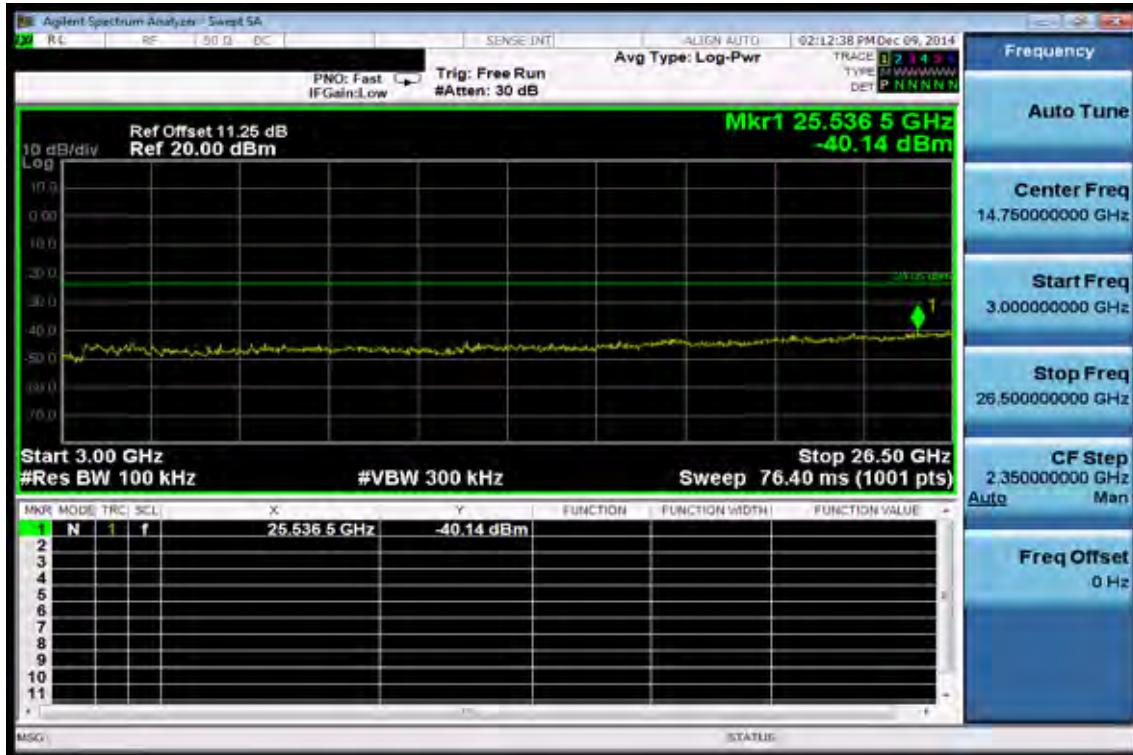
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## Ch Mid 30MHz – 3GHz



## Ch Mid 3GHz – 26.5GHz



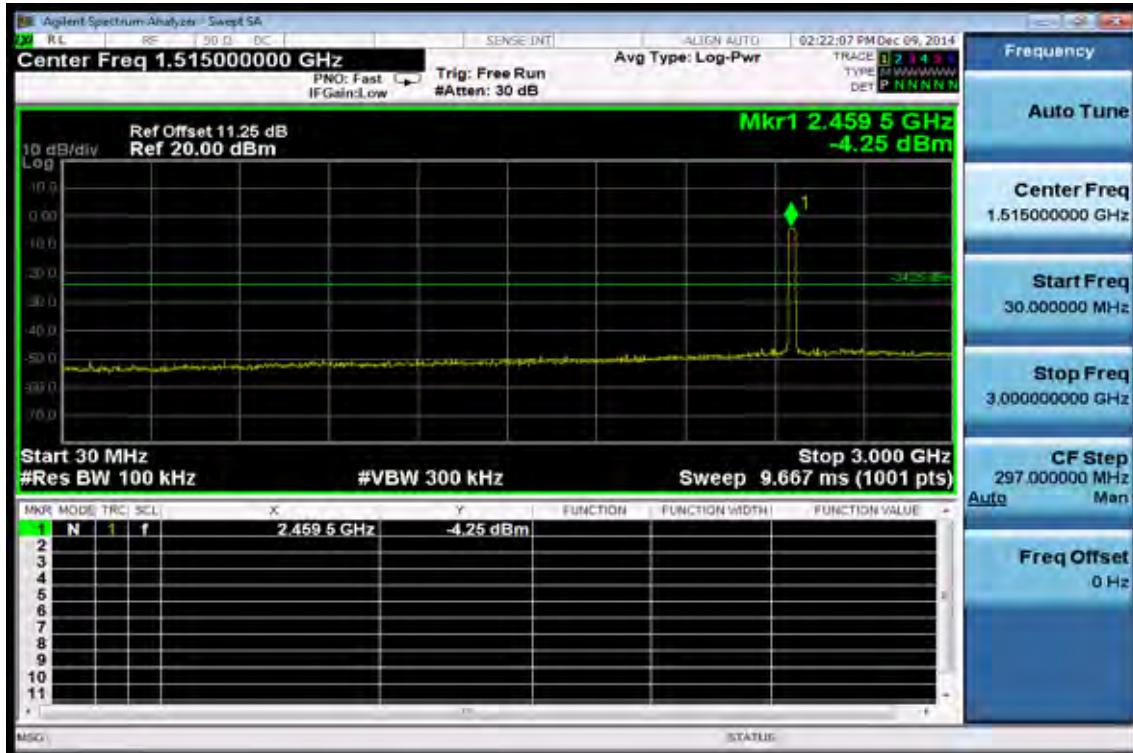
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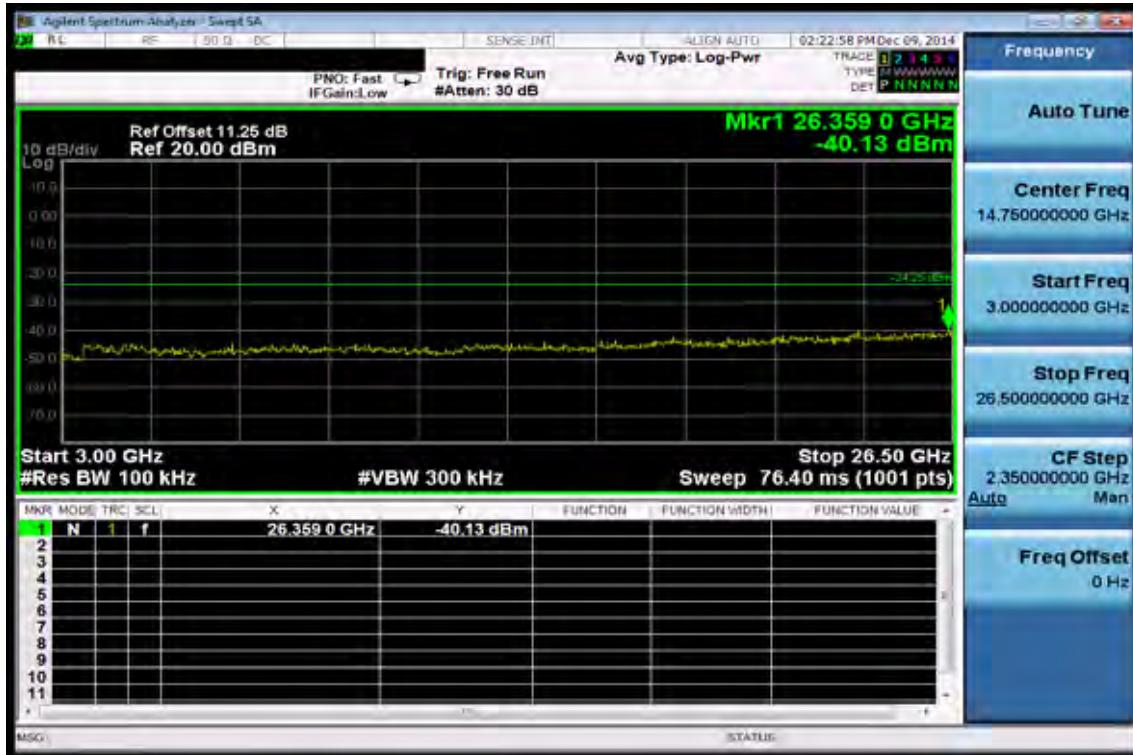
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## Ch High 30MHz – 3GHz



## Ch High 3GHz – 26.5GHz



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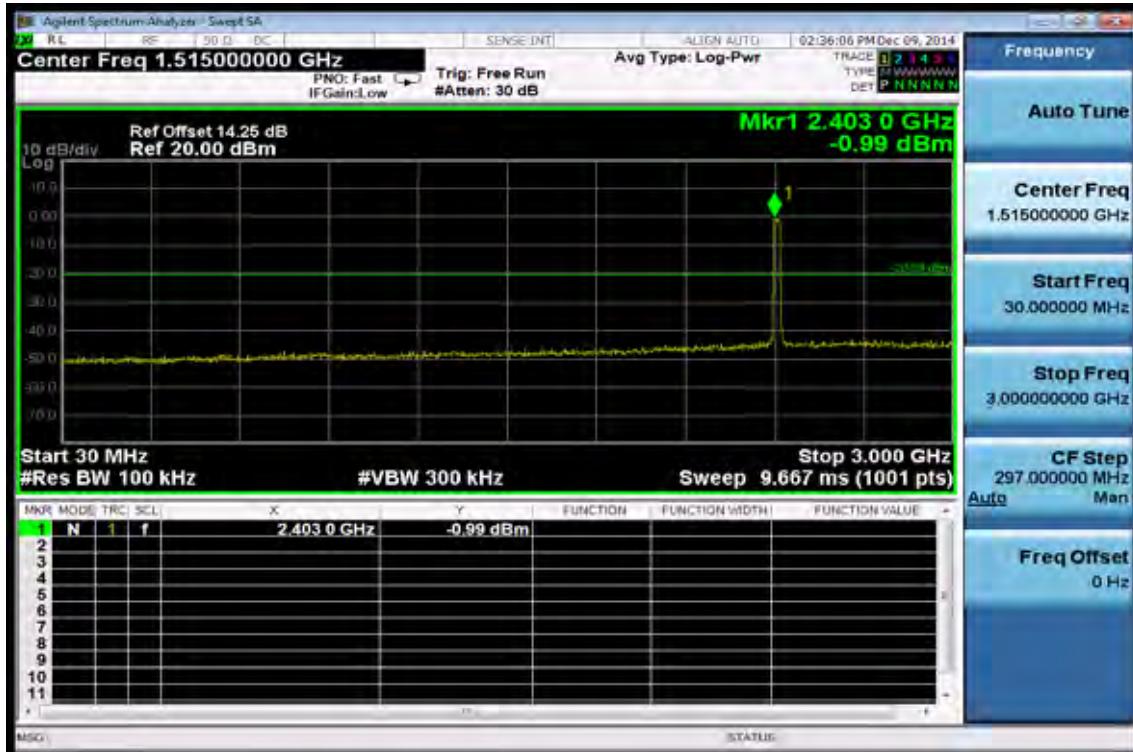
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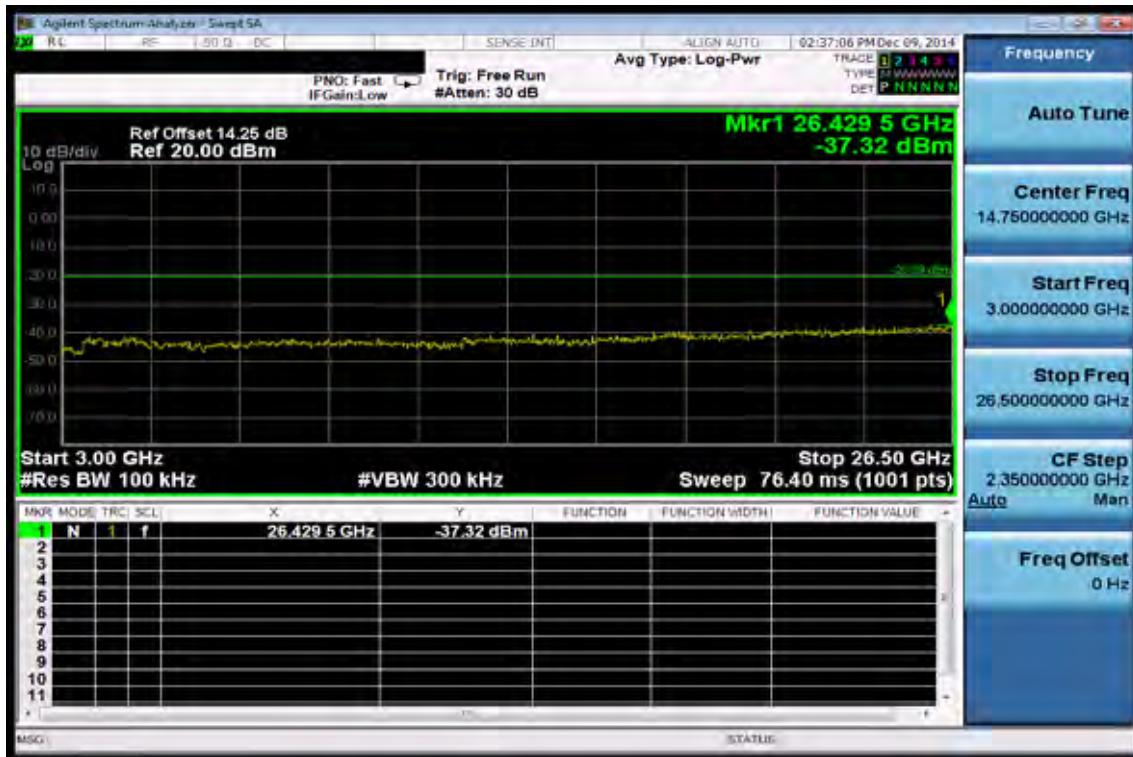
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## Ch Low 30MHz – 3GHz



## Ch Low 3GHz – 26.5GHz

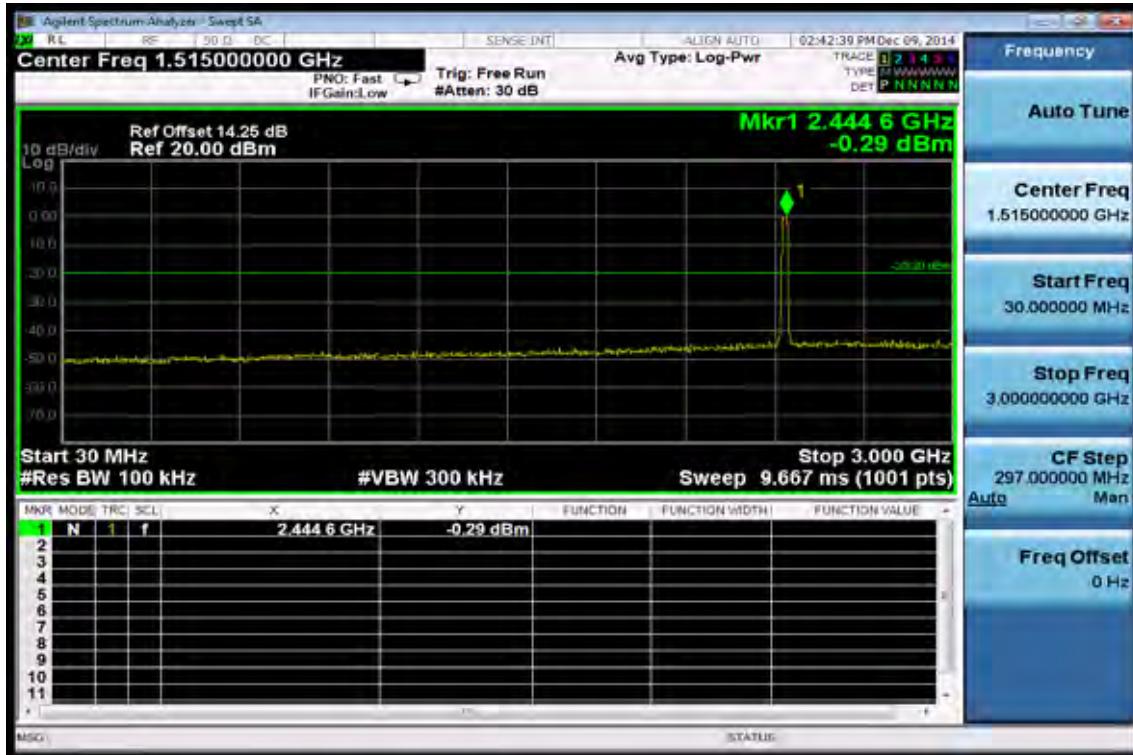


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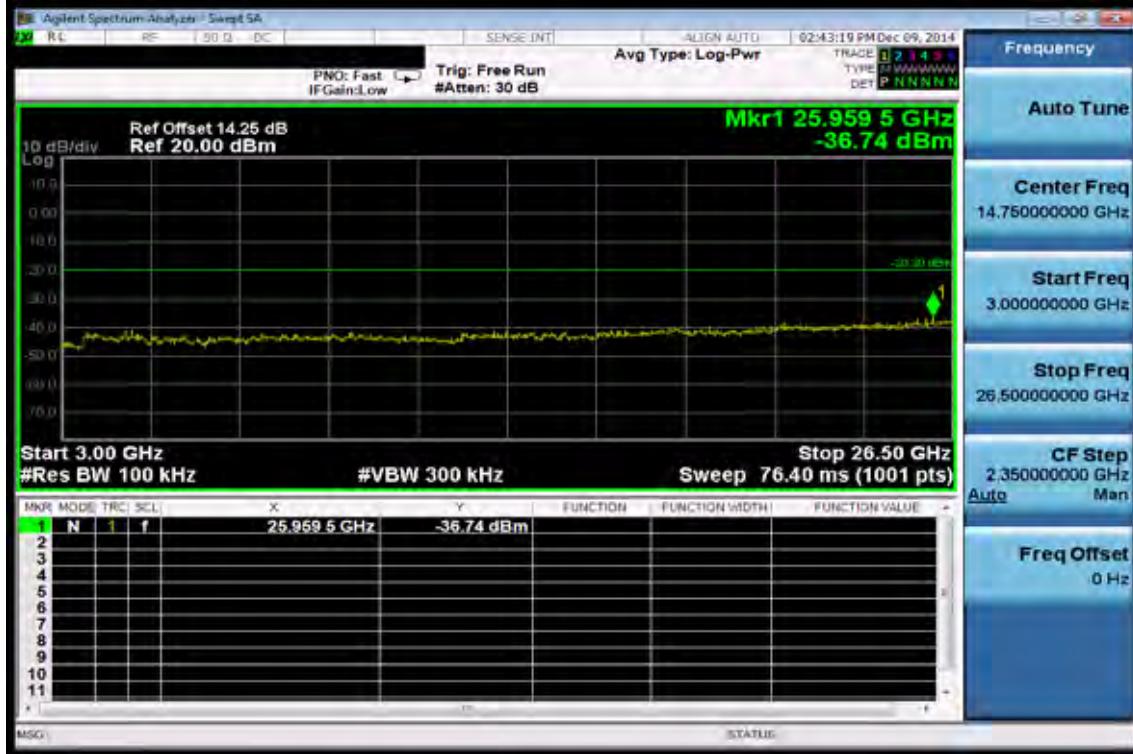
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## Ch Mid 30MHz – 3GHz



## Ch Mid 3GHz – 26.5GHz



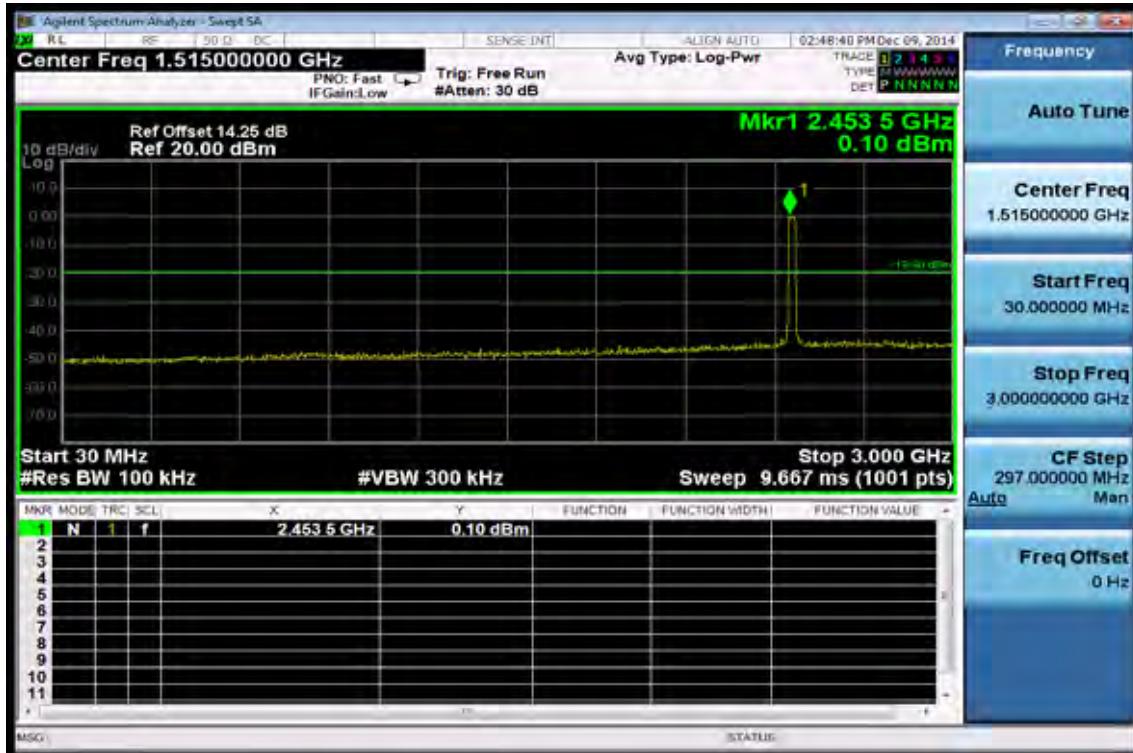
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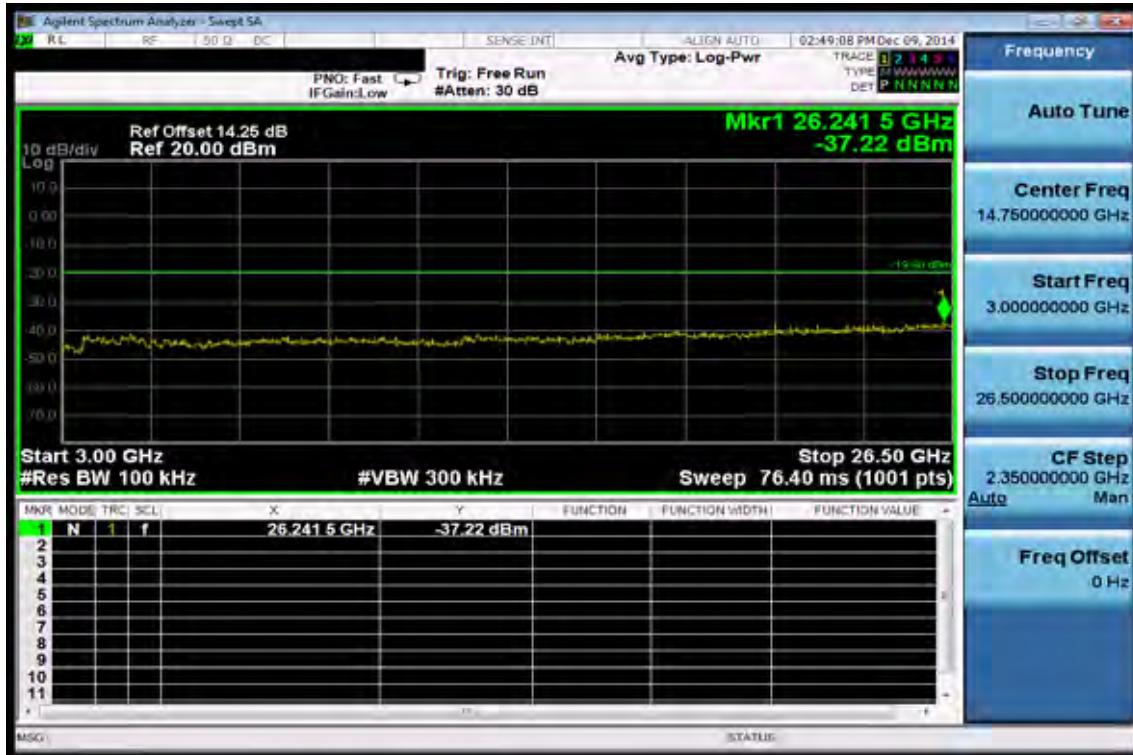
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## Ch High 30MHz – 3GHz



## Ch High 3GHz – 26.5GHz



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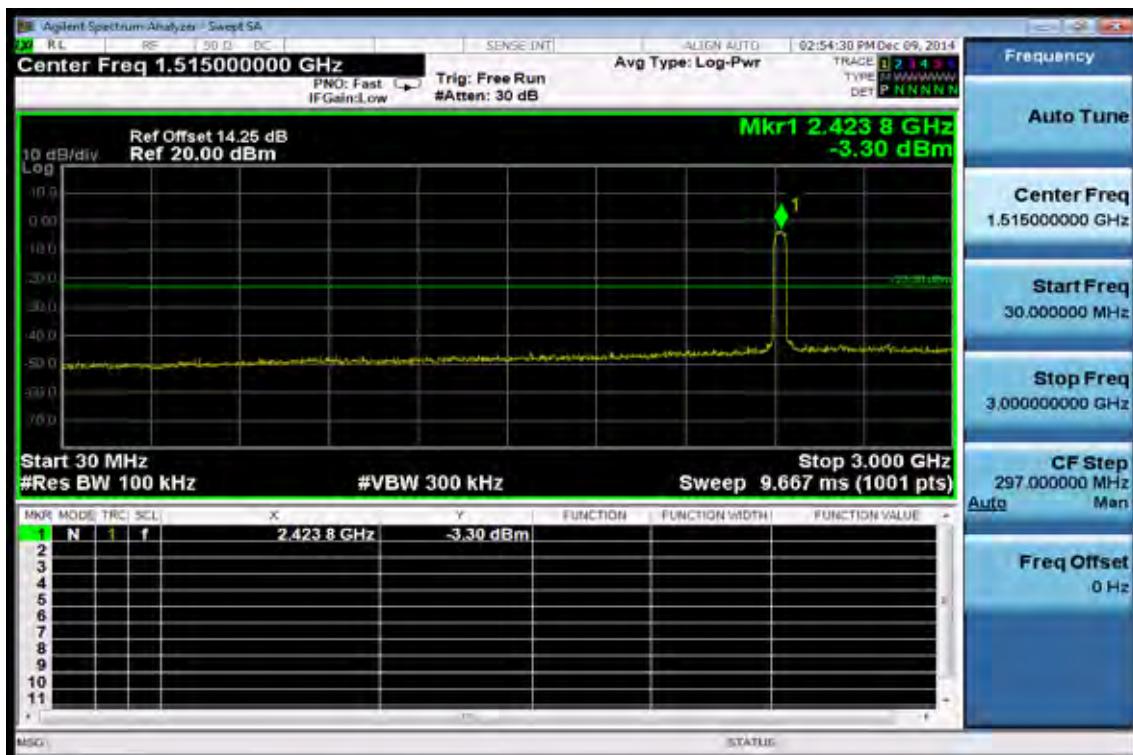
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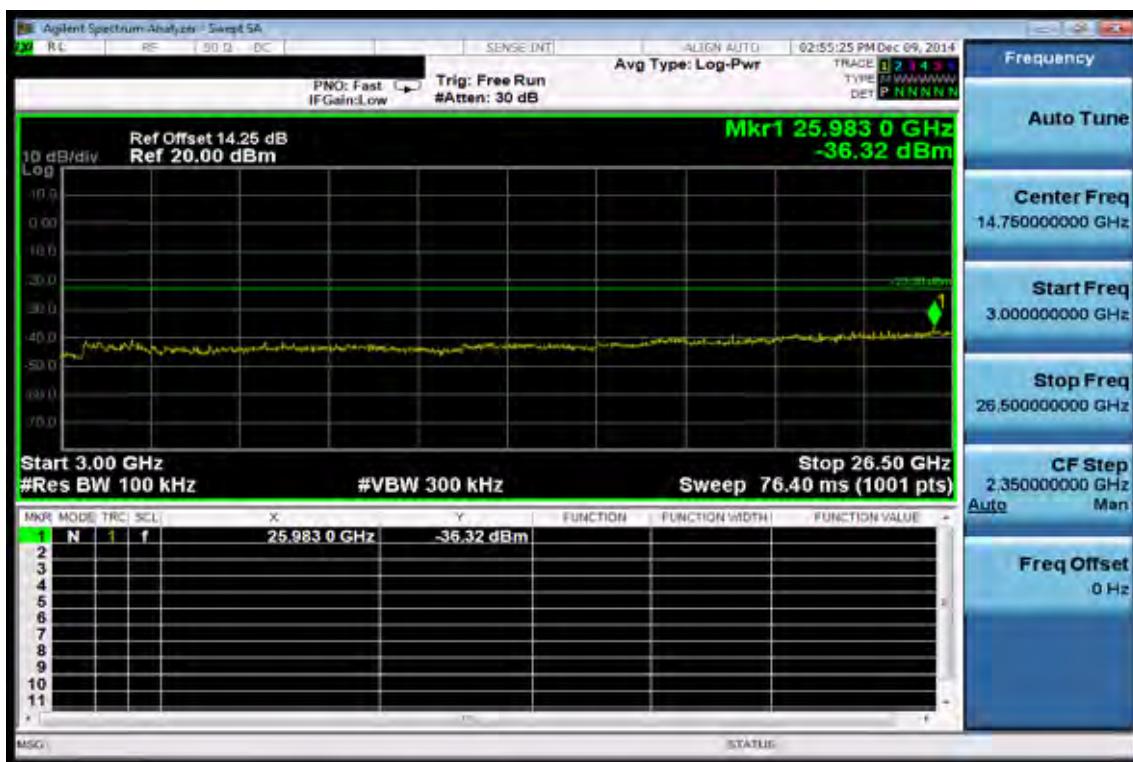
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## Ch Low 30MHz – 3GHz



## Ch Low 3GHz – 26.5GHz



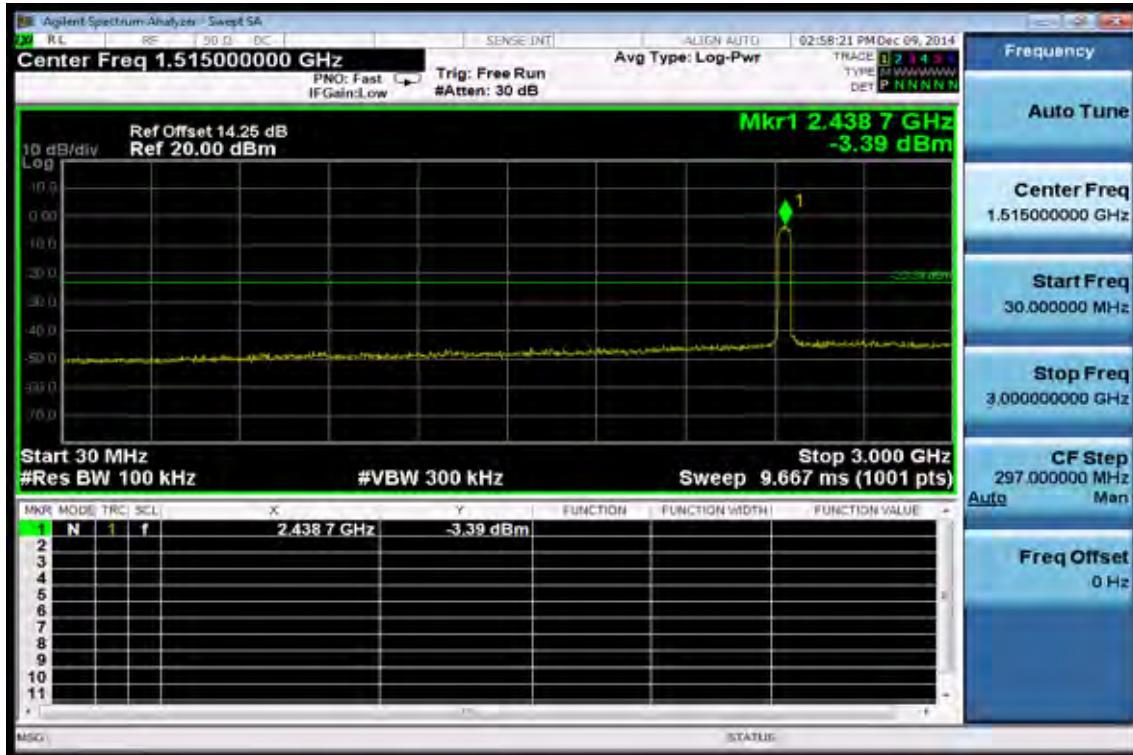
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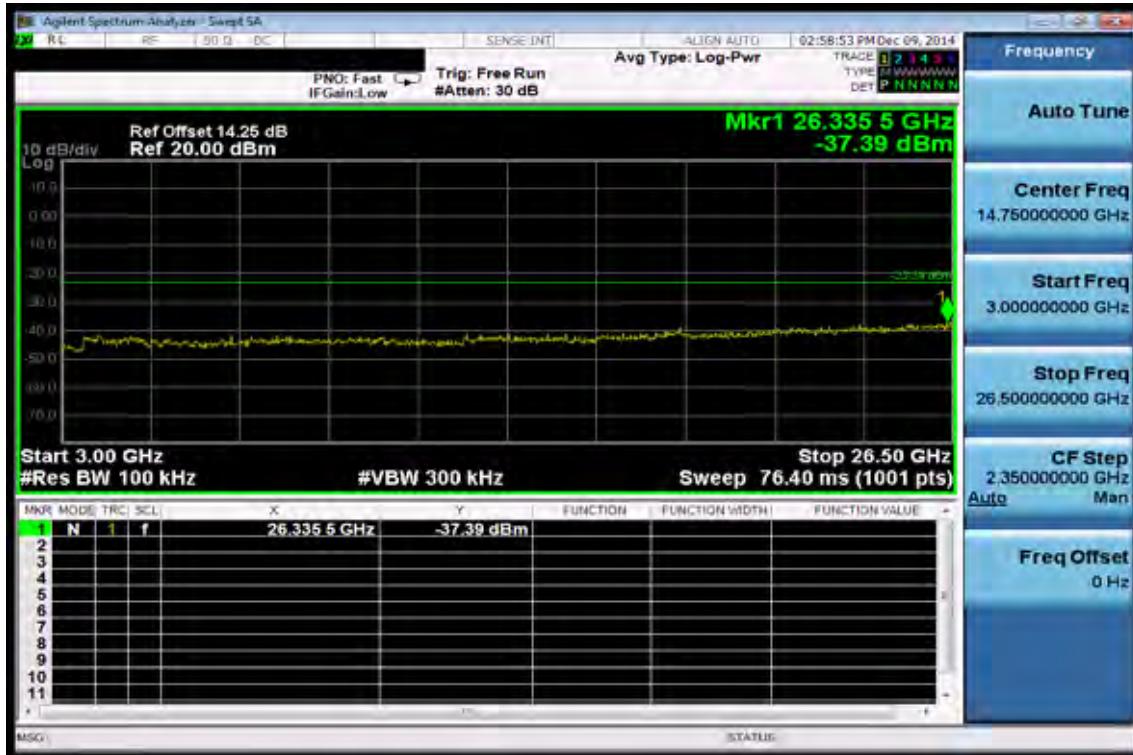
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## Ch Mid 30MHz – 3GHz



## Ch Mid 3GHz – 26.5GHz



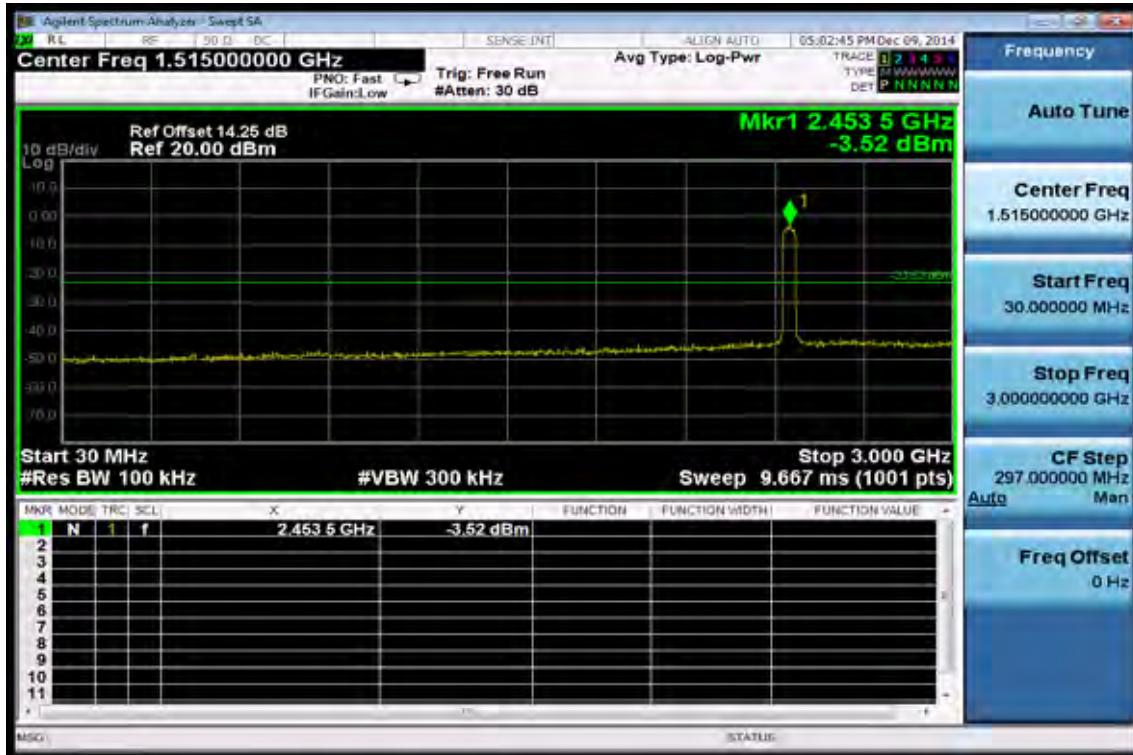
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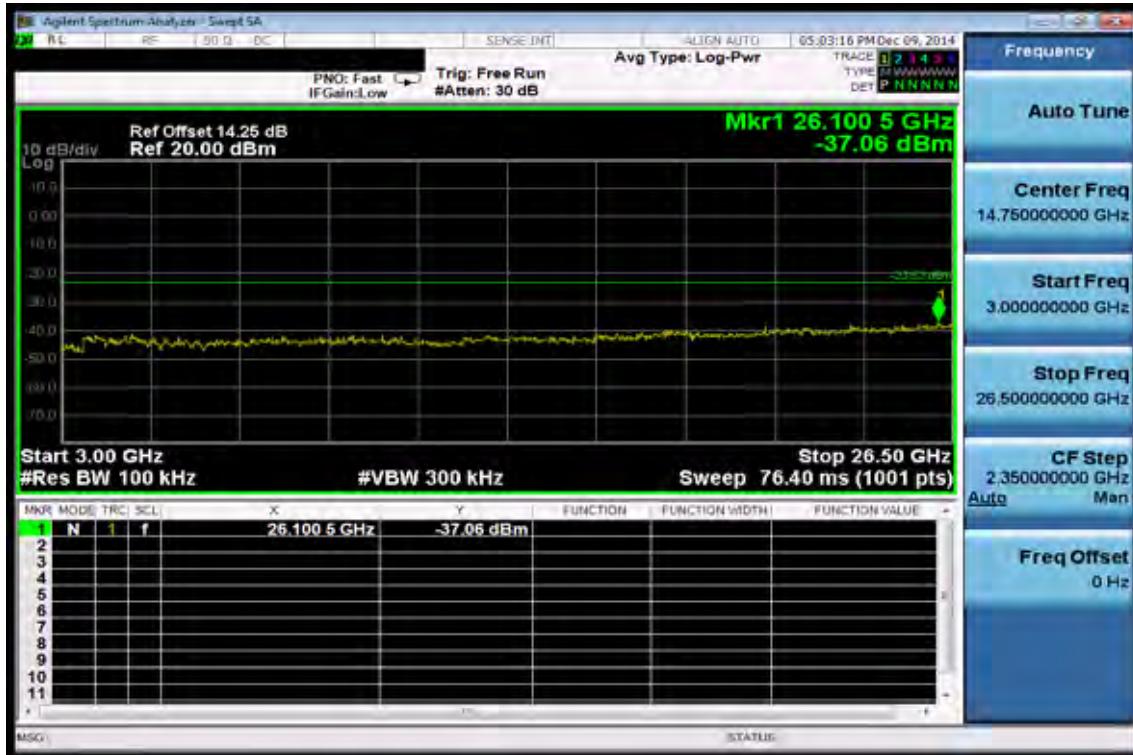
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## Ch High 30MHz – 3GHz



## Ch High 3GHz – 26.5GHz



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**Radiated Spurious Emission Measurement Result (802.11b-Antenna A)**

Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
30.97	S	Peak	53.29	-16.34	36.94	40.00	-3.06	
242.43	S	Peak	48.06	-21.28	26.78	46.00	-19.22	
399.57	S	Peak	44.38	-15.64	28.74	46.00	-17.26	
596.48	S	Peak	34.51	-12.21	22.29	46.00	-23.71	
773.99	S	Peak	28.87	-10.35	18.52	46.00	-27.48	
963.14	S	Peak	30.08	-8.97	21.12	54.00	-32.88	
4824.00	H	Peak	43.06	0.38	43.44	74.00	-30.56	
4824.00	H	Average	31.78	0.38	32.16	54.00	-21.84	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
62.98	S	Peak	55.90	-29.20	26.70	40.00	-13.30	
165.80	S	Peak	56.22	-23.38	32.84	43.50	-10.66	
239.52	S	Peak	63.31	-21.66	41.65	46.00	-4.35	
390.84	S	Peak	53.13	-16.25	36.88	46.00	-9.12	
482.02	S	Peak	45.72	-14.39	31.33	46.00	-14.67	
960.23	S	Peak	37.31	-8.94	28.38	54.00	-25.62	
4824.00	H	Peak	41.84	0.38	42.22	74.00	-31.78	
4824.00	H	Average	31.35	0.38	31.73	54.00	-22.27	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.15	-16.34	35.80	40.00	-4.20	
61.04	S	Peak	54.96	-29.18	25.79	40.00	-14.21	
239.52	S	Peak	48.33	-21.66	26.67	46.00	-19.33	
399.57	S	Peak	46.10	-15.64	30.46	46.00	-15.54	
503.36	S	Peak	36.09	-14.25	21.84	46.00	-24.16	
960.23	S	Peak	29.85	-8.94	20.91	54.00	-33.09	
4874.00	H	Peak	42.06	0.41	42.46	74.00	-31.54	
4874.00	H	Average	31.61	0.41	32.02	54.00	-21.98	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.98	S	Peak	57.21	-29.20	28.01	40.00	-11.99	
154.16	S	Peak	52.92	-23.09	29.83	43.50	-13.67	
242.43	S	Peak	63.40	-21.28	42.12	46.00	-3.88	
390.84	S	Peak	52.97	-16.25	36.73	46.00	-9.27	
479.11	S	Peak	45.31	-14.32	30.99	46.00	-15.01	
960.23	S	Peak	38.11	-8.94	29.17	54.00	-24.83	
4874.00	H	Peak	41.75	0.41	42.16	74.00	-31.84	
4874.00	H	Average	29.21	0.41	29.62	54.00	-24.38	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.42	-16.34	36.08	40.00	-3.92	
61.04	S	Peak	53.73	-29.18	24.55	40.00	-15.45	
242.43	S	Peak	48.29	-21.28	27.01	46.00	-18.99	
399.57	S	Peak	44.34	-15.64	28.70	46.00	-17.30	
481.05	S	Peak	34.58	-14.34	20.24	46.00	-25.76	
960.23	S	Peak	29.56	-8.94	20.63	54.00	-33.37	
4924.00	H	Peak	40.93	0.50	41.43	74.00	-32.57	
4924.00	H	Average	31.92	0.50	32.42	54.00	-21.58	
7386.00	H	Peak	44.13	5.03	49.16	74.00	-24.84	
7386.00	H	Average	36.21	5.02	41.23	54.00	-12.78	
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band :802.11b  
 ARFCN :CH 11  
 Fundamental Frequency :2462 MHz  
 Operation Mode :TX HIGH  
 EUT Pol. :H Plane

Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	55.29	-29.22	26.07	40.00	-13.93	
155.13	S	Peak	53.13	-23.07	30.06	43.50	-13.44	
242.43	S	Peak	62.71	-21.28	41.43	46.00	-4.57	
390.84	S	Peak	52.73	-16.25	36.48	46.00	-9.52	
479.11	S	Peak	44.79	-14.32	30.47	46.00	-15.53	
961.20	S	Peak	37.81	-8.93	28.88	54.00	-25.12	
4924.00	H	Peak	41.04	0.50	41.53	74.00	-32.47	
4924.00	H	Average	30.91	0.50	31.41	54.00	-22.59	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11b-Antenna B)**

Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
84.32	S	Peak	55.73	-25.87	29.86	40.00	-10.14	
137.67	S	Peak	51.22	-21.97	29.25	43.50	-14.25	
239.52	S	Peak	51.58	-21.66	29.92	46.00	-16.08	
390.84	S	Peak	50.79	-16.25	34.54	46.00	-11.46	
480.08	S	Peak	40.36	-14.28	26.08	46.00	-19.92	
719.67	S	Peak	37.50	-11.26	26.24	46.00	-19.76	
4824.00	H	Peak	43.23	0.38	43.61	74.00	-30.39	
4824.00	H	Average	32.52	0.38	32.90	54.00	-21.10	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
165.80	S	Peak	60.03	-23.38	36.65	43.50	-6.85	
241.46	S	Peak	64.35	-21.40	42.95	46.00	-3.05	
390.84	S	Peak	54.10	-16.25	37.85	46.00	-8.15	
476.20	S	Peak	48.34	-14.48	33.86	46.00	-12.14	
720.64	S	Peak	42.14	-11.23	30.91	46.00	-15.09	
961.20	S	Peak	39.95	-8.93	31.02	54.00	-22.98	
4824.00	H	Peak	43.62	0.38	44.01	74.00	-29.99	
4824.00	H	Average	32.51	0.38	32.89	54.00	-21.11	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	56.14	-28.85	27.29	40.00	-12.71	
137.67	S	Peak	51.25	-21.97	29.27	43.50	-14.23	
239.52	S	Peak	51.71	-21.66	30.05	46.00	-15.95	
399.57	S	Peak	51.22	-15.64	35.58	46.00	-10.42	
688.63	S	Peak	38.63	-11.52	27.11	46.00	-18.89	
900.09	S	Peak	39.44	-9.15	30.29	46.00	-15.71	
4874.00	H	Peak	43.07	0.41	43.48	74.00	-30.52	
4874.00	H	Average	32.48	0.41	32.89	54.00	-21.11	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	52.99	-28.72	24.28	40.00	-15.72	
166.77	S	Peak	60.32	-23.50	36.82	43.50	-6.68	
242.43	S	Peak	63.88	-21.28	42.60	46.00	-3.40	
399.57	S	Peak	53.35	-15.64	37.72	46.00	-8.29	
480.08	S	Peak	48.39	-14.28	34.10	46.00	-11.90	
960.23	S	Peak	41.31	-8.94	32.38	54.00	-21.62	
4874.00	H	Peak	43.29	0.41	43.70	74.00	-30.30	
4874.00	H	Average	32.66	0.41	33.07	54.00	-20.93	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	51.82	-28.85	22.97	40.00	-17.03	
137.67	S	Peak	51.26	-21.97	29.29	43.50	-14.21	
165.80	S	Peak	52.25	-23.38	28.88	43.50	-14.62	
239.52	S	Peak	51.42	-21.66	29.77	46.00	-16.23	
399.57	S	Peak	50.68	-15.64	35.05	46.00	-10.95	
798.24	S	Peak	39.38	-10.16	29.22	46.00	-16.78	
4924.00	H	Peak	43.12	0.50	43.62	74.00	-30.38	
4924.00	H	Average	33.40	0.50	33.90	54.00	-20.10	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
163.86	S	Peak	60.34	-23.23	37.11	43.50	-6.39	
236.61	S	Peak	63.99	-21.97	42.02	46.00	-3.98	
390.84	S	Peak	54.06	-16.25	37.81	46.00	-8.19	
477.17	S	Peak	48.16	-14.45	33.71	46.00	-12.29	
722.58	S	Peak	41.43	-11.00	30.43	46.00	-15.57	
960.23	S	Peak	41.14	-8.94	32.21	54.00	-21.79	
4924.00	H	Peak	43.12	0.50	43.61	74.00	-30.39	
4924.00	H	Average	32.55	0.50	33.05	54.00	-20.95	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11b-Antenna C)**

Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	53.02	-16.34	36.68	40.00	-3.32	
277.35	S	Peak	59.39	-19.61	39.78	46.00	-6.22	
346.22	S	Peak	55.70	-17.45	38.25	46.00	-7.75	
504.33	S	Peak	48.55	-14.27	34.27	46.00	-11.73	
762.35	S	Peak	46.82	-10.51	36.32	46.00	-9.68	
832.19	S	Peak	46.00	-9.98	36.03	46.00	-9.97	
4824.00	H	Peak	40.95	0.38	41.33	74.00	-32.67	
4824.00	H	Average	30.46	0.38	30.84	54.00	-23.16	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
31.94	S	Peak	48.53	-16.84	31.70	40.00	-8.30	
277.35	S	Peak	62.10	-19.61	42.49	46.00	-3.51	
356.89	S	Peak	55.04	-17.00	38.04	46.00	-7.96	
480.08	S	Peak	48.75	-14.28	34.46	46.00	-11.54	
623.64	S	Peak	45.38	-12.17	33.21	46.00	-12.79	
960.23	S	Peak	40.37	-8.94	31.43	54.00	-22.57	
4824.00	H	Peak	40.84	0.38	41.22	74.00	-32.78	
4824.00	H	Average	29.88	0.38	30.26	54.00	-23.74	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	53.23	-16.84	36.40	40.00	-3.60	
277.35	S	Peak	58.12	-19.61	38.51	46.00	-7.49	
346.22	S	Peak	53.23	-17.45	35.78	46.00	-10.22	
479.11	S	Peak	45.45	-14.32	31.13	46.00	-14.87	
693.48	S	Peak	43.58	-11.46	32.12	46.00	-13.88	
832.19	S	Peak	43.23	-9.98	33.25	46.00	-12.75	
4874.00	H	Peak	39.62	0.41	40.03	74.00	-33.97	
4874.00	H	Average	30.12	0.41	30.53	54.00	-23.47	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	49.52	-16.34	33.18	40.00	-6.82	
153.19	S	Peak	55.20	-23.00	32.20	43.50	-11.30	
277.35	S	Peak	60.52	-19.61	40.91	46.00	-5.09	
399.57	S	Peak	51.59	-15.64	35.95	46.00	-10.05	
623.64	S	Peak	44.27	-12.17	32.10	46.00	-13.90	
960.23	S	Peak	41.37	-8.94	32.43	54.00	-21.57	
4874.00	H	Peak	40.49	0.41	40.90	74.00	-33.10	
4874.00	H	Average	29.67	0.41	30.08	54.00	-23.92	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	52.24	-16.84	35.41	40.00	-4.59	
138.64	S	Peak	49.04	-21.99	27.05	43.50	-16.45	
277.35	S	Peak	57.33	-19.61	37.72	46.00	-8.28	
346.22	S	Peak	55.36	-17.45	37.91	46.00	-8.09	
693.48	S	Peak	43.61	-11.46	32.15	46.00	-13.85	
832.19	S	Peak	44.45	-9.98	34.48	46.00	-11.52	
4924.00	H	Peak	39.77	0.50	40.27	74.00	-33.73	
4924.00	H	Average	30.42	0.50	30.92	54.00	-23.08	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	50.15	-16.34	33.80	40.00	-6.20	
157.07	S	Peak	54.39	-23.04	31.35	43.50	-12.15	
277.35	S	Peak	60.12	-19.61	40.51	46.00	-5.49	
481.05	S	Peak	46.95	-14.34	32.61	46.00	-13.39	
623.64	S	Peak	44.20	-12.17	32.03	46.00	-13.97	
960.23	S	Peak	42.59	-8.94	33.66	54.00	-20.34	
4924.00	H	Peak	40.22	0.50	40.71	74.00	-33.29	
4924.00	H	Average	30.59	0.50	31.09	54.00	-22.91	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11b-Antenna D)**

Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
68.80	S	Peak		52.12	-28.72	23.41	40.00	-16.59
126.03	S	Peak		51.20	-21.56	29.64	43.50	-13.86
223.03	S	Peak		53.82	-23.79	30.03	46.00	-15.97
390.84	S	Peak		50.80	-16.25	34.56	46.00	-11.44
481.05	S	Peak		42.89	-14.34	28.56	46.00	-17.44
960.23	S	Peak		34.88	-8.94	25.94	54.00	-28.06
4824.00	H	Peak		41.77	0.38	42.15	74.00	-31.85
4824.00	H	Average		32.67	0.38	33.05	54.00	-20.95
7236.00	H	Peak		---				
9648.00	H	Peak		---				
12060.00	H	Peak		---				
14472.00	H	Peak		---				
16884.00	H	Peak		---				
19296.00	H	Peak		---				
21708.00	H	Peak		---				
24120.00	H	Peak		---				

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	55.53	-28.85	26.68	40.00	-13.32	
165.80	S	Peak	53.96	-23.38	30.59	43.50	-12.91	
239.52	S	Peak	58.31	-21.66	36.65	46.00	-9.35	
390.84	S	Peak	53.45	-16.25	37.20	46.00	-8.80	
480.08	S	Peak	48.67	-14.28	34.39	46.00	-11.61	
960.23	S	Peak	45.13	-8.94	36.19	54.00	-17.81	
4824.00	H	Peak	41.81	0.38	42.19	74.00	-31.81	
4824.00	H	Average	32.45	0.38	32.83	54.00	-21.17	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V	dB				
68.80	S	Peak	51.70	-28.72	22.99	40.00	-17.01	
128.94	S	Peak	51.07	-21.57	29.50	43.50	-14.00	
256.98	S	Peak	45.65	-19.60	26.05	46.00	-19.95	
390.84	S	Peak	51.33	-16.25	35.08	46.00	-10.92	
480.08	S	Peak	43.03	-14.28	28.75	46.00	-17.25	
961.20	S	Peak	33.57	-8.93	24.64	54.00	-29.36	
4874.00	H	Peak	41.90	0.41	42.31	74.00	-31.69	
4874.00	H	Average	30.05	0.41	30.46	54.00	-23.54	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	54.33	-28.85	25.48	40.00	-14.52	
166.77	S	Peak	53.67	-23.50	30.17	43.50	-13.33	
239.52	S	Peak	59.27	-21.66	37.62	46.00	-8.38	
390.84	S	Peak	54.76	-16.25	38.51	46.00	-7.49	
480.08	S	Peak	49.42	-14.28	35.14	46.00	-10.86	
961.20	S	Peak	42.97	-8.93	34.04	54.00	-19.96	
4874.00	H	Peak	41.55	0.41	41.96	74.00	-32.04	
4874.00	H	Average	32.75	0.41	33.16	54.00	-20.84	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	53.68	-28.85	24.84	40.00	-15.16	
125.06	S	Peak	51.11	-21.59	29.53	43.50	-13.97	
399.57	S	Peak	50.88	-15.64	35.24	46.00	-10.76	
480.08	S	Peak	41.26	-14.28	26.97	46.00	-19.03	
717.73	S	Peak	36.82	-11.31	25.51	46.00	-20.49	
960.23	S	Peak	33.75	-8.94	24.82	54.00	-29.18	
4924.00	H	Peak	41.68	0.50	42.17	74.00	-31.83	
4924.00	H	Average	30.90	0.50	31.40	54.00	-22.60	
7386.00	H	Peak	47.57	5.03	52.60	74.00	-21.40	
7386.00	H	Average	40.15	5.03	45.18	54.00	-8.82	
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band	:802.11b	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	54.89	-28.85	26.05	40.00	-13.95	
166.77	S	Peak	55.86	-23.50	32.36	43.50	-11.14	
239.52	S	Peak	58.74	-21.66	37.08	46.00	-8.92	
390.84	S	Peak	54.08	-16.25	37.84	46.00	-8.16	
480.08	S	Peak	49.48	-14.28	35.20	46.00	-10.81	
960.23	S	Peak	44.36	-8.94	35.42	54.00	-18.58	
4924.00	H	Peak	41.18	0.50	41.68	74.00	-32.32	
4924.00	H	Average	31.64	0.50	32.14	54.00	-21.86	
7386.00	H	Peak	46.00	5.03	51.03	74.00	-22.97	
7386.00	H	Average	37.38	5.03	42.41	54.00	-11.59	
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11g-Antenna A)**

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
31.94	S	Peak	53.01	-16.84	36.18	40.00	-3.82	
242.43	S	Peak	47.63	-21.28	26.35	46.00	-19.65	
399.57	S	Peak	44.33	-15.64	28.69	46.00	-17.31	
481.05	S	Peak	34.32	-14.34	19.99	46.00	-26.01	
781.75	S	Peak	29.46	-10.42	19.04	46.00	-26.96	
963.14	S	Peak	28.36	-8.97	19.39	54.00	-34.61	
4824.00	H	Peak	42.09	0.38	42.47	74.00	-31.53	
4824.00	H	Average	29.43	0.38	29.81	54.00	-24.19	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	55.26	-29.22	26.04	40.00	-13.96	
154.16	S	Peak	53.35	-23.09	30.26	43.50	-13.24	
240.49	S	Peak	62.20	-21.52	40.68	46.00	-5.32	
390.84	S	Peak	52.85	-16.25	36.60	46.00	-9.40	
480.08	S	Peak	44.45	-14.28	30.16	46.00	-15.84	
960.23	S	Peak	37.59	-8.94	28.65	54.00	-25.35	
4824.00	H	Peak	41.44	0.38	41.82	74.00	-32.18	
4824.00	H	Average	29.23	0.38	29.61	54.00	-24.39	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.81	-16.34	36.47	40.00	-3.53	
62.01	S	Peak	52.25	-29.22	23.03	40.00	-16.97	
154.16	S	Peak	44.35	-23.09	21.26	43.50	-22.24	
242.43	S	Peak	47.38	-21.28	26.10	46.00	-19.90	
399.57	S	Peak	44.75	-15.64	29.11	46.00	-16.89	
959.26	S	Peak	28.67	-8.88	19.79	46.00	-26.21	
4874.00	H	Peak	40.81	0.41	41.22	74.00	-32.78	
4874.00	H	Average	29.02	0.41	29.43	54.00	-24.57	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	55.87	-29.22	26.65	40.00	-13.35	
165.80	S	Peak	53.69	-23.38	30.31	43.50	-13.19	
240.49	S	Peak	63.12	-21.52	41.60	46.00	-4.40	
390.84	S	Peak	52.53	-16.25	36.28	46.00	-9.72	
480.08	S	Peak	45.59	-14.28	31.31	46.00	-14.69	
960.23	S	Peak	38.85	-8.94	29.92	54.00	-24.08	
4874.00	H	Peak	41.18	0.41	41.59	74.00	-32.41	
4874.00	H	Average	28.78	0.41	29.19	54.00	-24.81	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	53.05	-16.84	36.21	40.00	-3.79	
156.10	S	Peak	44.56	-23.01	21.54	43.50	-21.96	
239.52	S	Peak	48.21	-21.66	26.55	46.00	-19.45	
399.57	S	Peak	45.52	-15.64	29.88	46.00	-16.12	
800.18	S	Peak	30.61	-10.16	20.44	46.00	-25.56	
964.11	S	Peak	28.17	-8.96	19.22	54.00	-34.78	
4924.00	H	Peak	41.63	0.50	42.13	74.00	-31.87	
4924.00	H	Average	29.94	0.50	30.44	54.00	-23.56	
7386.00	H	Peak	45.14	5.03	50.17	74.00	-23.83	
7386.00	H	Average	30.97	5.03	35.99	54.00	-18.01	
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band :802.11 g  
 ARFCN :CH 11  
 Fundamental Frequency :2462 MHz  
 Operation Mode :TX HIGH  
 EUT Pol. :H Plane

Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
61.04	S	Peak	54.21	-29.18	25.03	40.00	-14.97	
154.16	S	Peak	53.49	-23.09	30.40	43.50	-13.10	
243.40	S	Peak	62.19	-21.14	41.05	46.00	-4.95	
390.84	S	Peak	52.76	-16.25	36.51	46.00	-9.49	
478.14	S	Peak	45.15	-14.39	30.75	46.00	-15.25	
960.23	S	Peak	37.49	-8.94	28.56	54.00	-25.44	
4924.00	H	Peak	41.13	0.50	41.63	74.00	-32.37	
4924.00	H	Average	29.90	0.50	30.40	54.00	-23.60	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11g-Antenna B)**

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			Reading Level dB $\mu$ V	Factor dB				
44.55	S	Peak	51.14	-23.95	27.19	40.00	-12.81	
68.80	S	Peak	55.93	-28.72	27.21	40.00	-12.79	
137.67	S	Peak	51.19	-21.97	29.22	43.50	-14.28	
239.52	S	Peak	51.44	-21.66	29.78	46.00	-16.22	
399.57	S	Peak	50.35	-15.64	34.72	46.00	-11.28	
721.61	S	Peak	37.45	-11.12	26.33	46.00	-19.67	
3184.00	S	Peak	48.83	-2.93	45.90	74.00	-28.10	
3184.00	S	Average	29.69	-2.93	26.76	54.00	-27.24	
4824.00	H	Peak	42.45	0.38	42.83	74.00	-31.17	
4824.00	H	Average	29.14	0.38	29.52	54.00	-24.48	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	56.38	-28.72	27.66	40.00	-12.34	
166.77	S	Peak	60.40	-23.50	36.90	43.50	-6.60	
235.64	S	Peak	63.48	-22.08	41.40	46.00	-4.60	
480.08	S	Peak	48.40	-14.28	34.12	46.00	-11.88	
721.61	S	Peak	42.01	-11.12	30.88	46.00	-15.12	
960.23	S	Peak	41.24	-8.94	32.31	54.00	-21.69	
4824.00	H	Peak	40.76	0.38	41.14	74.00	-32.86	
4824.00	H	Average	29.18	0.38	29.56	54.00	-24.44	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	55.64	-28.72	26.92	40.00	-13.08	
138.64	S	Peak	51.27	-21.99	29.28	43.50	-14.22	
239.52	S	Peak	51.67	-21.66	30.01	46.00	-15.99	
390.84	S	Peak	49.96	-16.25	33.71	46.00	-12.29	
480.08	S	Peak	40.53	-14.28	26.25	46.00	-19.75	
722.58	S	Peak	37.80	-11.00	26.80	46.00	-19.20	
4874.00	H	Peak	40.80	0.41	41.21	74.00	-32.79	
4874.00	H	Average	28.91	0.41	29.32	54.00	-24.68	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
163.86	S	Peak	59.76	-23.23	36.53	43.50	-6.97	
235.64	S	Peak	63.59	-22.08	41.52	46.00	-4.48	
391.81	S	Peak	54.35	-16.16	38.19	46.00	-7.81	
480.08	S	Peak	48.36	-14.28	34.07	46.00	-11.93	
720.64	S	Peak	42.33	-11.23	31.10	46.00	-14.90	
960.23	S	Peak	40.88	-8.94	31.94	54.00	-22.06	
4874.00	H	Peak	41.41	0.41	41.82	74.00	-32.18	
4874.00	H	Average	28.78	0.41	29.19	54.00	-24.81	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
44.55	S	Peak	56.60	-23.95	32.65	40.00	-7.35	
138.64	S	Peak	51.03	-21.99	29.04	43.50	-14.46	
239.52	S	Peak	51.47	-21.66	29.81	46.00	-16.19	
399.57	S	Peak	50.67	-15.64	35.03	46.00	-10.97	
477.17	S	Peak	41.14	-14.45	26.69	46.00	-19.31	
721.61	S	Peak	37.18	-11.12	26.06	46.00	-19.94	
4924.00	H	Peak	41.37	0.50	41.87	74.00	-32.13	
4924.00	H	Average	31.21	0.50	31.71	54.00	-22.29	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	55.31	-28.85	26.47	40.00	-13.53	
165.80	S	Peak	59.59	-23.38	36.21	43.50	-7.29	
238.55	S	Peak	63.53	-21.79	41.75	46.00	-4.25	
394.72	S	Peak	55.00	-16.00	39.00	46.00	-7.00	
480.08	S	Peak	48.01	-14.28	33.72	46.00	-12.28	
960.23	S	Peak	41.29	-8.94	32.35	54.00	-21.65	
4924.00	H	Peak	41.57	0.50	42.06	74.00	-31.94	
4924.00	H	Average	30.12	0.50	30.62	54.00	-23.38	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11g-Antenna C)**

Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.85	-16.34	36.51	40.00	-3.49	
277.35	S	Peak	57.70	-19.61	38.09	46.00	-7.91	
346.22	S	Peak	55.30	-17.45	37.85	46.00	-8.15	
500.45	S	Peak	46.54	-14.28	32.26	46.00	-13.74	
693.48	S	Peak	45.16	-11.46	33.71	46.00	-12.29	
832.19	S	Peak	45.45	-9.98	35.47	46.00	-10.53	
4824.00	H	Peak	40.58	0.38	40.96	74.00	-33.04	
4824.00	H	Average	29.27	0.38	29.65	54.00	-24.35	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	49.83	-16.34	33.49	40.00	-6.51	
277.35	S	Peak	59.79	-19.61	40.18	46.00	-5.82	
399.57	S	Peak	51.81	-15.64	36.18	46.00	-9.82	
623.64	S	Peak	43.64	-12.17	31.46	46.00	-14.54	
797.27	S	Peak	40.53	-10.17	30.36	46.00	-15.64	
960.23	S	Peak	41.93	-8.94	32.99	54.00	-21.01	
4824.00	H	Peak	39.89	0.38	40.27	74.00	-33.73	
4824.00	H	Average	29.28	0.38	29.66	54.00	-24.34	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	53.49	-16.84	36.66	40.00	-3.34	
277.35	S	Peak	57.87	-19.61	38.26	46.00	-7.74	
346.22	S	Peak	54.09	-17.45	36.64	46.00	-9.36	
482.02	S	Peak	46.68	-14.39	32.28	46.00	-13.72	
693.48	S	Peak	43.68	-11.46	32.22	46.00	-13.78	
832.19	S	Peak	45.75	-9.98	35.77	46.00	-10.23	
4874.00	H	Peak	39.93	0.41	40.34	74.00	-33.66	
4874.00	H	Average	28.91	0.41	29.32	54.00	-24.68	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	49.42	-16.84	32.58	40.00	-7.42	
277.35	S	Peak	59.81	-19.61	40.20	46.00	-5.80	
399.57	S	Peak	51.75	-15.64	36.11	46.00	-9.89	
519.85	S	Peak	43.73	-13.87	29.85	46.00	-16.15	
623.64	S	Peak	45.63	-12.17	33.46	46.00	-12.54	
960.23	S	Peak	40.98	-8.94	32.05	54.00	-21.95	
4874.00	H	Peak	39.19	0.41	39.60	74.00	-34.40	
4874.00	H	Average	28.93	0.41	29.34	54.00	-24.66	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V	dB $\mu$ V/m				
30.97	S	Peak	50.94	-16.34	34.60	40.00	-5.40	
277.35	S	Peak	58.54	-19.61	38.93	46.00	-7.07	
346.22	S	Peak	53.78	-17.45	36.33	46.00	-9.67	
492.69	S	Peak	45.12	-14.33	30.78	46.00	-15.22	
762.35	S	Peak	46.13	-10.51	35.62	46.00	-10.38	
832.19	S	Peak	43.62	-9.98	33.64	46.00	-12.36	
4924.00	H	Peak	39.75	0.50	40.24	74.00	-33.76	
4924.00	H	Average	30.49	0.50	30.99	54.00	-23.01	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	48.43	-16.84	31.60	40.00	-8.40	
277.35	S	Peak	62.55	-19.61	42.94	46.00	-3.06	
480.08	S	Peak	48.34	-14.28	34.06	46.00	-11.94	
623.64	S	Peak	44.35	-12.17	32.17	46.00	-13.83	
693.48	S	Peak	43.00	-11.46	31.54	46.00	-14.46	
960.23	S	Peak	39.56	-8.94	30.63	54.00	-23.37	
4924.00	H	Peak	40.59	0.50	41.09	74.00	-32.91	
4924.00	H	Average	30.14	0.50	30.64	54.00	-23.36	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11g-Antenna D)**

Operation Band :802.11 g  
ARFCN :CH 01 Test Date :2014-12-12  
Fundamental Frequency :2412 MHz Temp./Humi. :20 deg\_C/73 RH  
Operation Mode :TX LOW Engineer :Tai  
EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
67.83	S	Peak	53.21	-28.85	24.37	40.00	-15.63
126.03	S	Peak	51.15	-21.56	29.59	43.50	-13.91
390.84	S	Peak	51.36	-16.25	35.11	46.00	-10.89
483.96	S	Peak	43.00	-14.35	28.65	46.00	-17.35
715.79	S	Peak	36.36	-11.36	24.99	46.00	-21.01
961.20	S	Peak	33.64	-8.93	24.71	54.00	-29.29
4824.00	H	Peak	40.80	0.38	41.18	74.00	-32.82
4824.00	H	Average	29.39	0.38	29.77	54.00	-24.23
7236.00	H	Peak	43.54	4.72	48.25	74.00	-25.75
7236.00	H	Average	29.70	4.72	34.42	54.00	-19.58
9648.00	H	Peak	---				
12060.00	H	Peak	---				
14472.00	H	Peak	---				
16884.00	H	Peak	---				
19296.00	H	Peak	---				
21708.00	H	Peak	---				
24120.00	H	Peak	---				

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	56.58	-28.85	27.74	40.00	-12.26	
242.43	S	Peak	58.82	-21.28	37.54	46.00	-8.46	
390.84	S	Peak	53.95	-16.25	37.70	46.00	-8.30	
480.08	S	Peak	48.70	-14.28	34.42	46.00	-11.58	
719.67	S	Peak	41.42	-11.26	30.16	46.00	-15.84	
960.23	S	Peak	43.33	-8.94	34.40	54.00	-19.61	
4824.00	H	Peak	41.39	0.38	41.78	74.00	-32.22	
4824.00	H	Average	29.22	0.38	29.60	54.00	-24.40	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
35.82	S	Peak	44.76	-19.03	25.73	40.00	-14.27	
68.80	S	Peak	53.95	-28.72	25.24	40.00	-14.76	
126.03	S	Peak	51.03	-21.56	29.47	43.50	-14.03	
399.57	S	Peak	50.92	-15.64	35.28	46.00	-10.72	
479.11	S	Peak	43.77	-14.32	29.45	46.00	-16.55	
961.20	S	Peak	33.71	-8.93	24.77	54.00	-29.23	
4874.00	H	Peak	41.76	0.41	42.16	74.00	-31.84	
4874.00	H	Average	28.77	0.41	29.18	54.00	-24.82	
7311.00	H	Peak	45.40	4.83	50.23	74.00	-23.77	
7311.00	H	Average	31.09	4.83	35.93	54.00	-18.08	
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
66.86	S	Peak	56.52	-29.05	27.47	40.00	-12.53	
166.77	S	Peak	53.12	-23.50	29.62	43.50	-13.88	
233.70	S	Peak	58.19	-22.31	35.87	46.00	-10.13	
390.84	S	Peak	53.69	-16.25	37.44	46.00	-8.56	
480.08	S	Peak	49.01	-14.28	34.73	46.00	-11.27	
960.23	S	Peak	42.11	-8.94	33.17	54.00	-20.83	
4874.00	H	Peak	41.73	0.41	42.13	74.00	-31.87	
4874.00	H	Average	28.90	0.41	29.31	54.00	-24.69	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
40.67	S	Peak	51.67	-21.71	29.96	40.00	-10.04	
86.26	S	Peak	56.56	-25.48	31.08	40.00	-8.92	
127.00	S	Peak	51.04	-21.55	29.49	43.50	-14.01	
399.57	S	Peak	51.26	-15.64	35.62	46.00	-10.38	
800.18	S	Peak	36.55	-10.16	26.38	46.00	-19.62	
963.14	S	Peak	32.92	-8.97	23.96	54.00	-30.04	
4924.00	H	Peak	41.43	0.50	41.93	74.00	-32.07	
4924.00	H	Average	30.66	0.50	31.16	54.00	-22.84	
7386.00	H	Peak	45.03	5.03	50.06	74.00	-23.94	
7386.00	H	Average	26.58	5.03	31.61	54.00	-22.39	
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band	:802.11 g	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	55.88	-28.85	27.03	40.00	-12.97	
236.61	S	Peak	58.15	-21.97	36.18	46.00	-9.82	
390.84	S	Peak	53.84	-16.25	37.59	46.00	-8.41	
480.08	S	Peak	49.25	-14.28	34.97	46.00	-11.03	
715.79	S	Peak	42.24	-11.36	30.87	46.00	-15.13	
960.23	S	Peak	42.47	-8.94	33.53	54.00	-20.47	
4924.00	H	Peak	41.92	0.50	42.42	74.00	-31.58	
4924.00	H	Average	30.90	0.50	31.40	54.00	-22.60	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_20M-Antenna A)**

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
30.97	S	Peak	53.00	-16.34	36.66	40.00	-3.34	
72.68	S	Peak	55.27	-28.15	27.12	40.00	-12.88	
243.40	S	Peak	46.45	-21.14	25.31	46.00	-20.69	
399.57	S	Peak	45.82	-15.64	30.19	46.00	-15.81	
502.39	S	Peak	35.31	-14.19	21.12	46.00	-24.88	
961.20	S	Peak	28.09	-8.93	19.15	54.00	-34.85	
4824.00	H	Peak	41.78	0.38	42.17	74.00	-31.83	
4824.00	H	Average	29.60	0.38	29.98	54.00	-24.02	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 01 Test Date :2014-12-12  
 Fundamental Frequency :2412 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX LOW Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	55.17	-29.22	25.95	40.00	-14.05	
154.16	S	Peak	54.32	-23.09	31.23	43.50	-12.27	
239.52	S	Peak	62.87	-21.66	41.22	46.00	-4.78	
399.57	S	Peak	52.30	-15.64	36.66	46.00	-9.34	
478.14	S	Peak	44.73	-14.39	30.33	46.00	-15.67	
960.23	S	Peak	37.80	-8.94	28.86	54.00	-25.14	
4824.00	H	Peak	41.57	0.38	41.95	74.00	-32.05	
4824.00	H	Average	29.21	0.38	29.59	54.00	-24.41	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	53.02	-16.34	36.67	40.00	-3.33	
62.01	S	Peak	54.47	-29.22	25.25	40.00	-14.75	
242.43	S	Peak	47.34	-21.28	26.06	46.00	-19.94	
399.57	S	Peak	45.26	-15.64	29.62	46.00	-16.38	
481.05	S	Peak	34.66	-14.34	20.33	46.00	-25.67	
967.02	S	Peak	27.70	-8.74	18.96	54.00	-35.04	
4874.00	H	Peak	41.01	0.41	41.42	74.00	-32.58	
4874.00	H	Average	29.10	0.41	29.51	54.00	-24.49	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.98	S	Peak	55.54	-29.20	26.34	40.00	-13.66	
165.80	S	Peak	53.25	-23.38	29.87	43.50	-13.63	
242.43	S	Peak	63.36	-21.28	42.08	46.00	-3.92	
399.57	S	Peak	51.55	-15.64	35.91	46.00	-10.09	
481.05	S	Peak	46.16	-14.34	31.82	46.00	-14.18	
960.23	S	Peak	38.37	-8.94	29.43	54.00	-24.57	
4874.00	H	Peak	40.73	0.41	41.14	74.00	-32.86	
4874.00	H	Average	28.82	0.41	29.23	54.00	-24.77	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.26	-16.34	35.92	40.00	-4.08	
62.01	S	Peak	54.15	-29.22	24.93	40.00	-15.07	
239.52	S	Peak	46.74	-21.66	25.08	46.00	-20.92	
399.57	S	Peak	45.23	-15.64	29.60	46.00	-16.40	
480.08	S	Peak	34.23	-14.28	19.95	46.00	-26.05	
960.23	S	Peak	28.53	-8.94	19.59	54.00	-34.41	
4924.00	H	Peak	40.95	0.50	41.44	74.00	-32.56	
4924.00	H	Average	30.03	0.50	30.53	54.00	-23.47	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	54.46	-29.22	25.24	40.00	-14.76	
243.40	S	Peak	62.14	-21.14	40.99	46.00	-5.01	
399.57	S	Peak	51.81	-15.64	36.17	46.00	-9.83	
481.05	S	Peak	46.37	-14.34	32.03	46.00	-13.97	
797.27	S	Peak	36.31	-10.17	26.14	46.00	-19.86	
960.23	S	Peak	37.00	-8.94	28.07	54.00	-25.93	
4924.00	H	Peak	40.66	0.50	41.16	74.00	-32.84	
4924.00	H	Average	30.68	0.50	31.18	54.00	-22.82	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_20M-Antenna B)**

Operation Band :802.11 n20M  
 ARFCN :CH 01 Test Date :2014-12-12  
 Fundamental Frequency :2412 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX LOW Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
44.55	S	Peak	51.10	-23.95	27.15	40.00	-12.85
137.67	S	Peak	51.55	-21.97	29.58	43.50	-13.92
239.52	S	Peak	51.82	-21.66	30.16	46.00	-15.84
399.57	S	Peak	50.67	-15.64	35.03	46.00	-10.97
480.08	S	Peak	41.52	-14.28	27.24	46.00	-18.76
718.70	S	Peak	37.78	-11.27	26.52	46.00	-19.48
4824.00	H	Peak	40.76	0.38	41.15	74.00	-32.85
4824.00	H	Average	29.32	0.38	29.70	54.00	-24.30
7236.00	H	Peak	---				
9648.00	H	Peak	---				
12060.00	H	Peak	---				
14472.00	H	Peak	---				
16884.00	H	Peak	---				
19296.00	H	Peak	---				
21708.00	H	Peak	---				
24120.00	H	Peak	---				

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Operation Band :802.11 n20M  
 ARFCN :CH 01 Test Date :2014-12-12  
 Fundamental Frequency :2412 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX LOW Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	55.71	-28.72	26.99	40.00	-13.01	
163.86	S	Peak	60.12	-23.23	36.88	43.50	-6.62	
243.40	S	Peak	63.01	-21.14	41.86	46.00	-4.14	
390.84	S	Peak	54.68	-16.25	38.43	46.00	-7.57	
480.08	S	Peak	48.33	-14.28	34.04	46.00	-11.96	
960.23	S	Peak	41.00	-8.94	32.07	54.00	-21.93	
4824.00	H	Peak	41.71	0.38	42.10	74.00	-31.90	
4824.00	H	Average	29.39	0.38	29.77	54.00	-24.23	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	54.29	-28.72	25.57	40.00	-14.43	
137.67	S	Peak	51.47	-21.97	29.50	43.50	-14.00	
239.52	S	Peak	51.61	-21.66	29.96	46.00	-16.04	
399.57	S	Peak	50.53	-15.64	34.90	46.00	-11.10	
486.87	S	Peak	41.63	-14.55	27.08	46.00	-18.92	
718.70	S	Peak	37.10	-11.27	25.83	46.00	-20.17	
3198.00	S	Peak	49.26	-2.85	46.41	74.00	-27.59	
3198.00	S	Average	29.91	-2.85	27.06	54.00	-26.94	
4874.00	H	Peak	41.86	0.41	42.27	74.00	-31.73	
4874.00	H	Average	28.81	0.41	29.22	54.00	-24.78	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
166.77	S	Peak	59.78	-23.50	36.28	43.50	-7.22	
237.58	S	Peak	64.28	-21.88	42.40	46.00	-3.60	
390.84	S	Peak	54.14	-16.25	37.89	46.00	-8.11	
480.08	S	Peak	47.87	-14.28	33.58	46.00	-12.42	
719.67	S	Peak	41.91	-11.26	30.65	46.00	-15.35	
960.23	S	Peak	40.80	-8.94	31.86	54.00	-22.14	
4874.00	H	Peak	41.12	0.41	41.53	74.00	-32.47	
4874.00	H	Average	28.82	0.41	29.23	54.00	-24.77	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
137.67	S	Peak	51.18	-21.97	29.21	43.50	-14.29	
164.83	S	Peak	51.88	-23.26	28.62	43.50	-14.88	
239.52	S	Peak	51.80	-21.66	30.14	46.00	-15.86	
390.84	S	Peak	49.90	-16.25	33.65	46.00	-12.35	
503.36	S	Peak	42.29	-14.25	28.04	46.00	-17.96	
722.58	S	Peak	36.48	-11.00	25.48	46.00	-20.52	
4924.00	H	Peak	41.80	0.50	42.30	74.00	-31.70	
4924.00	H	Average	31.11	0.50	31.61	54.00	-22.39	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	57.06	-28.72	28.34	40.00	-11.66	
163.86	S	Peak	60.32	-23.23	37.09	43.50	-6.41	
236.61	S	Peak	63.71	-21.97	41.74	46.00	-4.26	
390.84	S	Peak	53.12	-16.25	36.87	46.00	-9.13	
719.67	S	Peak	41.98	-11.26	30.72	46.00	-15.28	
960.23	S	Peak	40.99	-8.94	32.06	54.00	-21.94	
4924.00	H	Peak	41.31	0.50	41.81	74.00	-32.19	
4924.00	H	Average	29.38	0.50	29.88	54.00	-24.12	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_20M-Antenna C)**

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV	dB $\mu$ V				
31.94	S	Peak	53.20	-16.84	36.37	40.00	-3.63	
138.64	S	Peak	52.11	-21.99	30.12	43.50	-13.38	
277.35	S	Peak	60.58	-19.61	40.97	46.00	-5.03	
498.51	S	Peak	49.95	-14.21	35.73	46.00	-10.27	
693.48	S	Peak	44.66	-11.46	33.20	46.00	-12.80	
832.19	S	Peak	46.87	-9.98	36.89	46.00	-9.11	
4824.00	H	Peak	39.67	0.38	40.05	74.00	-33.95	
4824.00	H	Average	29.28	0.38	29.66	54.00	-24.34	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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**Operation Band** :802.11 n20M  
**ARFCN** :CH 01  
**Fundamental Frequency** :2412 MHz  
**Operation Mode** :TX LOW  
**EUT Pol.** :H Plane

**Test Date** :2014-12-12  
**Temp./Humi.** :20 deg\_C/73 RH  
**Engineer** :Tai  
**Measurement Antenna Pol.** :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	48.96	-16.34	32.61	40.00	-7.39	
242.43	S	Peak	59.52	-21.28	38.24	46.00	-7.76	
312.27	S	Peak	57.21	-18.62	38.60	46.00	-7.40	
482.02	S	Peak	46.31	-14.39	31.92	46.00	-14.08	
623.64	S	Peak	44.39	-12.17	32.22	46.00	-13.79	
960.23	S	Peak	41.02	-8.94	32.08	54.00	-21.92	
4824.00	H	Peak	41.59	0.38	41.98	74.00	-32.02	
4824.00	H	Average	29.31	0.38	29.69	54.00	-24.31	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.67	-16.34	36.33	40.00	-3.67	
277.35	S	Peak	60.04	-19.61	40.43	46.00	-5.58	
346.22	S	Peak	54.05	-17.45	36.60	46.00	-9.40	
483.96	S	Peak	46.68	-14.35	32.33	46.00	-13.67	
693.48	S	Peak	44.17	-11.46	32.72	46.00	-13.28	
832.19	S	Peak	43.97	-9.98	34.00	46.00	-12.00	
4874.00	H	Peak	39.99	0.41	40.40	74.00	-33.60	
4874.00	H	Average	28.91	0.41	29.32	54.00	-24.68	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	49.10	-16.84	32.27	40.00	-7.73	
277.35	S	Peak	59.37	-19.61	39.76	46.00	-6.24	
390.84	S	Peak	51.92	-16.25	35.68	46.00	-10.32	
480.08	S	Peak	48.20	-14.28	33.91	46.00	-12.09	
623.64	S	Peak	44.93	-12.17	32.76	46.00	-13.24	
960.23	S	Peak	40.90	-8.94	31.96	54.00	-22.04	
4874.00	H	Peak	40.32	0.41	40.73	74.00	-33.27	
4874.00	H	Average	28.94	0.41	29.35	54.00	-24.65	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 11	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2462 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.99	-16.34	36.65	40.00	-3.35	
277.35	S	Peak	58.62	-19.61	39.01	46.00	-6.99	
346.22	S	Peak	55.54	-17.45	38.09	46.00	-7.91	
623.64	S	Peak	44.02	-12.17	31.85	46.00	-14.15	
762.35	S	Peak	44.62	-10.51	34.11	46.00	-11.89	
832.19	S	Peak	42.58	-9.98	32.60	46.00	-13.40	
4924.00	H	Peak	39.33	0.50	39.82	74.00	-34.18	
4924.00	H	Average	30.53	0.50	31.03	54.00	-22.97	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	51.08	-16.34	34.74	40.00	-5.26	
277.35	S	Peak	61.91	-19.61	42.30	46.00	-3.70	
480.08	S	Peak	47.37	-14.28	33.08	46.00	-12.92	
623.64	S	Peak	44.65	-12.17	32.48	46.00	-13.52	
693.48	S	Peak	40.87	-11.46	29.41	46.00	-16.59	
960.23	S	Peak	40.09	-8.94	31.16	54.00	-22.84	
4924.00	H	Peak	39.72	0.50	40.22	74.00	-33.78	
4924.00	H	Average	29.88	0.50	30.38	54.00	-23.62	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_20M-Antenna D)**

Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode	Spectrum Reading Level	Factor dB	Actual FS dB $\mu$ V	Limit @3m dB $\mu$ V/m	Margin dB
			PK/QP/AV				
66.86	S	Peak	58.26	-29.05	29.21	40.00	-10.79
126.03	S	Peak	51.11	-21.56	29.56	43.50	-13.94
259.89	S	Peak	44.94	-19.27	25.66	46.00	-20.34
399.57	S	Peak	51.29	-15.64	35.65	46.00	-10.35
480.08	S	Peak	45.73	-14.28	31.44	46.00	-14.56
740.04	S	Peak	46.75	-10.51	36.24	46.00	-9.76
4824.00	H	Peak	41.79	0.38	42.18	74.00	-31.82
4824.00	H	Average	29.18	0.38	29.56	54.00	-24.44
7236.00	H	Peak	---				
9648.00	H	Peak	---				
12060.00	H	Peak	---				
14472.00	H	Peak	---				
16884.00	H	Peak	---				
19296.00	H	Peak	---				
21708.00	H	Peak	---				
24120.00	H	Peak	---				

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Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 01	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2412 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	55.84	-28.85	26.99	40.00	-13.01	
161.92	S	Peak	53.38	-23.13	30.25	43.50	-13.25	
235.64	S	Peak	58.55	-22.08	36.47	46.00	-9.53	
399.57	S	Peak	53.40	-15.64	37.76	46.00	-8.24	
480.08	S	Peak	50.69	-14.28	36.40	46.00	-9.60	
960.23	S	Peak	43.39	-8.94	34.46	54.00	-19.54	
4824.00	H	Peak	41.73	0.38	42.11	74.00	-31.89	
4824.00	H	Average	29.37	0.38	29.75	54.00	-24.25	
7236.00	H	Peak	---					
9648.00	H	Peak	---					
12060.00	H	Peak	---					
14472.00	H	Peak	---					
16884.00	H	Peak	---					
19296.00	H	Peak	---					
21708.00	H	Peak	---					
24120.00	H	Peak	---					

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Operation Band	:802.11 n20M	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	52.61	-28.85	23.76	40.00	-16.24	
129.91	S	Peak	50.95	-21.52	29.43	43.50	-14.07	
282.20	S	Peak	45.47	-19.55	25.92	46.00	-20.08	
399.57	S	Peak	51.19	-15.64	35.55	46.00	-10.45	
481.05	S	Peak	44.61	-14.34	30.27	46.00	-15.73	
961.20	S	Peak	34.44	-8.93	25.50	54.00	-28.50	
4874.00	H	Peak	42.18	0.41	42.58	74.00	-31.42	
4874.00	H	Average	28.87	0.41	29.28	54.00	-24.72	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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**Operation Band** :802.11 n20M  
**ARFCN** :CH 06  
**Fundamental Frequency** :2437 MHz  
**Operation Mode** :TX MID  
**EUT Pol.** :H Plane

**Test Date** :2014-12-12  
**Temp./Humi.** :20 deg\_C/73 RH  
**Engineer** :Tai  
**Measurement Antenna Pol.** :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	55.39	-28.85	26.54	40.00	-13.46	
165.80	S	Peak	53.27	-23.38	29.89	43.50	-13.61	
238.55	S	Peak	57.93	-21.79	36.14	46.00	-9.86	
390.84	S	Peak	53.29	-16.25	37.05	46.00	-8.95	
480.08	S	Peak	50.22	-14.28	35.93	46.00	-10.07	
960.23	S	Peak	43.16	-8.94	34.22	54.00	-19.78	
4874.00	H	Peak	41.02	0.41	41.42	74.00	-32.58	
4874.00	H	Average	29.12	0.41	29.53	54.00	-24.47	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
34.85	S	Peak	52.90	-18.42	34.49	40.00	-5.51	
67.83	S	Peak	54.45	-28.85	25.61	40.00	-14.39	
128.94	S	Peak	51.22	-21.57	29.65	43.50	-13.85	
399.57	S	Peak	50.58	-15.64	34.95	46.00	-11.05	
482.02	S	Peak	41.35	-14.39	26.95	46.00	-19.05	
723.55	S	Peak	35.53	-10.93	24.60	46.00	-21.40	
4924.00	H	Peak	41.52	0.50	42.02	74.00	-31.98	
4924.00	H	Average	30.74	0.50	31.24	54.00	-22.76	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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Operation Band :802.11 n20M  
 ARFCN :CH 11 Test Date :2014-12-12  
 Fundamental Frequency :2462 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	57.55	-28.85	28.71	40.00	-11.29	
166.77	S	Peak	54.44	-23.50	30.94	43.50	-12.56	
242.43	S	Peak	58.16	-21.28	36.88	46.00	-9.12	
390.84	S	Peak	53.29	-16.25	37.04	46.00	-8.96	
479.11	S	Peak	49.34	-14.32	35.02	46.00	-10.98	
960.23	S	Peak	41.24	-8.94	32.30	54.00	-21.70	
4924.00	H	Peak	41.65	0.50	42.15	74.00	-31.85	
4924.00	H	Average	30.87	0.50	31.37	54.00	-22.63	
7386.00	H	Peak	---					
9848.00	H	Peak	---					
12310.00	H	Peak	---					
14772.00	H	Peak	---					
17234.00	H	Peak	---					
19696.00	H	Peak	---					
22158.00	H	Peak	---					
24620.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_40M-Antenna A)**

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.11	-16.34	35.77	40.00	-4.23	
242.43	S	Peak	44.40	-21.28	23.12	46.00	-22.88	
399.57	S	Peak	43.44	-15.64	27.80	46.00	-18.20	
506.27	S	Peak	34.17	-14.08	20.10	46.00	-25.90	
688.63	S	Peak	29.29	-11.52	17.78	46.00	-28.22	
961.20	S	Peak	28.43	-8.93	19.49	54.00	-34.51	
4844.00	H	Peak	41.12	0.39	41.51	74.00	-32.49	
4844.00	H	Average	29.31	0.39	29.70	54.00	-24.30	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 03 Test Date :2014-12-12  
 Fundamental Frequency :2422 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX LOW Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	55.66	-29.22	26.44	40.00	-13.56	
243.40	S	Peak	61.48	-21.14	40.33	46.00	-5.67	
390.84	S	Peak	52.62	-16.25	36.37	46.00	-9.63	
480.08	S	Peak	44.84	-14.28	30.55	46.00	-15.45	
721.61	S	Peak	34.82	-11.12	23.69	46.00	-22.31	
960.23	S	Peak	36.53	-8.94	27.60	54.00	-26.40	
4844.00	H	Peak	40.98	0.39	41.37	74.00	-32.63	
4844.00	H	Average	29.00	0.39	29.39	54.00	-24.61	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 06	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2437 MHz	Engineer	:Tai
Operation Mode	:TX MID	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	52.74	-16.34	36.39	40.00	-3.61	
154.16	S	Peak	45.67	-23.09	22.58	43.50	-20.92	
239.52	S	Peak	47.87	-21.66	26.21	46.00	-19.79	
399.57	S	Peak	44.95	-15.64	29.31	46.00	-16.69	
783.69	S	Peak	28.05	-10.32	17.73	46.00	-28.27	
960.23	S	Peak	31.62	-8.94	22.69	54.00	-31.31	
4874.00	H	Peak	42.07	0.41	42.48	74.00	-31.52	
4874.00	H	Average	29.06	0.41	29.47	54.00	-24.53	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.98	S	Peak	57.11	-29.20	27.92	40.00	-12.08	
165.80	S	Peak	55.07	-23.38	31.70	43.50	-11.80	
243.40	S	Peak	63.80	-21.14	42.65	46.00	-3.35	
390.84	S	Peak	53.85	-16.25	37.60	46.00	-8.40	
480.08	S	Peak	46.06	-14.28	31.78	46.00	-14.22	
960.23	S	Peak	41.09	-8.94	32.16	54.00	-21.84	
4874.00	H	Peak	41.88	0.41	42.29	74.00	-31.71	
4874.00	H	Average	28.77	0.41	29.18	54.00	-24.82	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 09	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2452 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	52.73	-16.84	35.89	40.00	-4.11	
62.01	S	Peak	54.92	-29.22	25.70	40.00	-14.30	
239.52	S	Peak	46.37	-21.66	24.71	46.00	-21.29	
399.57	S	Peak	44.08	-15.64	28.44	46.00	-17.56	
573.20	S	Peak	30.54	-12.36	18.18	46.00	-27.82	
960.23	S	Peak	29.49	-8.94	20.56	54.00	-33.44	
4904.00	H	Peak	41.09	0.43	41.52	74.00	-32.48	
4904.00	H	Average	28.89	0.43	29.32	54.00	-24.68	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 09	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2452 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
62.01	S	Peak	56.79	-29.22	27.57	40.00	-12.43	
242.43	S	Peak	63.53	-21.28	42.25	46.00	-3.75	
390.84	S	Peak	52.59	-16.25	36.35	46.00	-9.65	
480.08	S	Peak	46.07	-14.28	31.79	46.00	-14.21	
797.27	S	Peak	37.70	-10.17	27.52	46.00	-18.48	
960.23	S	Peak	36.69	-8.94	27.76	54.00	-26.25	
4904.00	H	Peak	41.27	0.43	41.70	74.00	-32.30	
4904.00	H	Average	28.59	0.43	29.02	54.00	-24.98	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_40M-Antenna B)**

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.00	S	Peak	51.71	-15.85	35.86	40.00	-4.14	
67.83	S	Peak	55.34	-28.85	26.50	40.00	-13.50	
137.67	S	Peak	51.50	-21.97	29.53	43.50	-13.97	
242.43	S	Peak	51.33	-21.28	30.05	46.00	-15.95	
399.57	S	Peak	50.47	-15.64	34.84	46.00	-11.16	
721.61	S	Peak	36.89	-11.12	25.77	46.00	-20.23	
3191.00	S	Peak	49.33	-2.89	46.44	74.00	-27.56	
3191.00	S	Average	29.26	-2.89	26.37	54.00	-27.63	
4844.00	H	Peak	41.42	0.39	41.81	74.00	-32.19	
4844.00	H	Average	29.31	0.39	29.70	54.00	-24.30	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 03  
 Fundamental Frequency :2422 MHz  
 Operation Mode :TX LOW  
 EUT Pol. :H Plane

Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	55.43	-28.72	26.71	40.00	-13.29	
164.83	S	Peak	60.38	-23.26	37.12	43.50	-6.38	
239.52	S	Peak	64.18	-21.66	42.52	46.00	-3.48	
390.84	S	Peak	55.45	-16.25	39.20	46.00	-6.80	
477.17	S	Peak	48.97	-14.45	34.52	46.00	-11.48	
717.73	S	Peak	41.35	-11.31	30.04	46.00	-15.96	
4844.00	H	Peak	41.77	0.39	42.16	74.00	-31.84	
4844.00	H	Average	29.56	0.39	29.95	54.00	-24.05	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.70	S	Peak	50.68	-16.21	34.47	40.00	-5.53	
277.35	S	Peak	59.76	-19.61	40.15	46.00	-5.85	
346.22	S	Peak	56.79	-17.45	39.34	46.00	-6.66	
623.64	S	Peak	48.93	-12.17	36.75	46.00	-9.25	
762.35	S	Peak	49.96	-10.51	39.45	46.00	-6.55	
797.27	S	Peak	45.64	-10.17	35.47	46.00	-10.53	
4874.00	H	Peak	41.20	0.41	41.61	74.00	-32.39	
4874.00	H	Average	28.77	0.41	29.18	54.00	-24.82	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
68.80	S	Peak	56.24	-28.72	27.52	40.00	-12.48	
165.80	S	Peak	59.62	-23.38	36.24	43.50	-7.26	
242.43	S	Peak	64.15	-21.28	42.87	46.00	-3.13	
390.84	S	Peak	55.27	-16.25	39.02	46.00	-6.98	
480.08	S	Peak	48.39	-14.28	34.10	46.00	-11.90	
719.67	S	Peak	41.95	-11.26	30.68	46.00	-15.32	
4874.00	H	Peak	41.05	0.41	41.46	74.00	-32.54	
4874.00	H	Average	28.74	0.41	29.15	54.00	-24.85	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 09	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2452 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.70	S	Peak	51.41	-16.21	35.20	40.00	-4.80	
277.35	S	Peak	60.01	-19.61	40.40	46.00	-5.60	
346.22	S	Peak	55.02	-17.45	37.57	46.00	-8.43	
727.43	S	Peak	49.82	-10.78	39.04	46.00	-6.96	
762.35	S	Peak	52.76	-10.51	42.25	46.00	-3.75	
797.27	S	Peak	45.55	-10.17	35.38	46.00	-10.62	
3198.00	S	Peak	48.78	-2.85	45.93	74.00	-28.07	
3198.00	S	Average	29.35	-2.85	26.50	54.00	-27.50	
4904.00	H	Peak	41.62	0.43	42.05	74.00	-31.95	
4904.00	H	Average	29.81	0.43	30.24	54.00	-23.76	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 09  
 Fundamental Frequency :2452 MHz  
 Operation Mode :TX HIGH  
 EUT Pol. :H Plane  
 Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
64.92	S	Peak	58.44	-29.22	29.22	40.00	-10.78	
155.13	S	Peak	59.10	-23.07	36.03	43.50	-7.47	
236.61	S	Peak	64.22	-21.97	42.25	46.00	-3.75	
399.57	S	Peak	54.11	-15.64	38.47	46.00	-7.53	
693.48	S	Peak	44.24	-11.46	32.78	46.00	-13.22	
762.35	S	Peak	47.22	-10.51	36.72	46.00	-9.28	
4904.00	H	Peak	41.82	0.43	42.25	74.00	-31.75	
4904.00	H	Average	29.81	0.43	30.24	54.00	-23.76	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_40M-Antenna C)**

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V	dB $\mu$ V/m				
30.97	S	Peak	51.88	-16.34	35.53	40.00	-4.47	
277.35	S	Peak	58.29	-19.61	38.68	46.00	-7.32	
346.22	S	Peak	53.46	-17.45	36.01	46.00	-9.99	
554.77	S	Peak	43.32	-12.36	30.96	46.00	-15.04	
693.48	S	Peak	42.59	-11.46	31.13	46.00	-14.87	
832.19	S	Peak	42.89	-9.98	32.91	46.00	-13.09	
4844.00	H	Peak	40.04	0.39	40.43	74.00	-33.57	
4844.00	H	Average	29.07	0.39	29.46	54.00	-24.54	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band :802.11 n40M  
ARFCN :CH 03 Test Date :2014-12-12  
Fundamental Frequency :2422 MHz Temp./Humi. :20 deg\_C/73 RH  
Operation Mode :TX LOW Engineer :Tai  
EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	49.51	-16.34	33.17	40.00	-6.83	
153.19	S	Peak	54.67	-23.00	31.67	43.50	-11.83	
277.35	S	Peak	62.47	-19.61	42.86	46.00	-3.14	
480.08	S	Peak	48.26	-14.28	33.97	46.00	-12.03	
623.64	S	Peak	45.42	-12.17	33.24	46.00	-12.76	
960.23	S	Peak	39.87	-8.94	30.93	54.00	-23.07	
4844.00	H	Peak	39.58	0.39	39.97	74.00	-34.03	
4844.00	H	Average	29.10	0.39	29.49	54.00	-24.51	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
31.94	S	Peak	52.60	-16.84	35.76	40.00	-4.24	
277.35	S	Peak	55.56	-19.61	35.95	46.00	-10.05	
346.22	S	Peak	54.64	-17.45	37.19	46.00	-8.81	
623.64	S	Peak	41.68	-12.17	29.51	46.00	-16.49	
693.48	S	Peak	41.51	-11.46	30.05	46.00	-15.95	
797.27	S	Peak	42.72	-10.17	32.55	46.00	-13.45	
4874.00	H	Peak	40.51	0.41	40.91	74.00	-33.09	
4874.00	H	Average	28.87	0.41	29.28	54.00	-24.72	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06  
 Fundamental Frequency :2437 MHz  
 Operation Mode :TX MID  
 EUT Pol. :H Plane  
 Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	49.73	-16.34	33.38	40.00	-6.62	
158.04	S	Peak	55.98	-23.12	32.86	43.50	-10.64	
277.35	S	Peak	60.81	-19.61	41.20	46.00	-4.80	
480.08	S	Peak	46.55	-14.28	32.26	46.00	-13.74	
623.64	S	Peak	46.19	-12.17	34.01	46.00	-11.99	
960.23	S	Peak	41.77	-8.94	32.83	54.00	-21.17	
4874.00	H	Peak	40.21	0.41	40.61	74.00	-33.39	
4874.00	H	Average	28.91	0.41	29.32	54.00	-24.68	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 09 Test Date :2014-12-12  
 Fundamental Frequency :2452 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX HIGH Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	51.21	-16.34	34.86	40.00	-5.14	
277.35	S	Peak	55.66	-19.61	36.05	46.00	-9.95	
346.22	S	Peak	53.24	-17.45	35.80	46.00	-10.20	
496.57	S	Peak	45.56	-14.18	31.39	46.00	-14.61	
623.64	S	Peak	42.99	-12.17	30.82	46.00	-15.18	
797.27	S	Peak	43.09	-10.17	32.92	46.00	-13.08	
4904.00	H	Peak	39.87	0.43	40.30	74.00	-33.70	
4904.00	H	Average	28.77	0.43	29.20	54.00	-24.80	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 09  
 Fundamental Frequency :2452 MHz  
 Operation Mode :TX HIGH  
 EUT Pol. :H Plane

Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
30.97	S	Peak	49.72	-16.34	33.38	40.00	-6.62	
277.35	S	Peak	59.86	-19.61	40.25	46.00	-5.75	
390.84	S	Peak	52.08	-16.25	35.83	46.00	-10.17	
481.05	S	Peak	47.98	-14.34	33.64	46.00	-12.36	
623.64	S	Peak	44.52	-12.17	32.35	46.00	-13.65	
960.23	S	Peak	39.74	-8.94	30.80	54.00	-23.20	
4904.00	H	Peak	39.36	0.43	39.80	74.00	-34.20	
4904.00	H	Average	28.78	0.43	29.21	54.00	-24.79	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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**Radiated Spurious Emission Measurement Result (802.11n\_40M-Antenna D)**

Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : "F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency.

"E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

"---" : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	54.19	-28.85	25.34	40.00	-14.66	
127.00	S	Peak	51.01	-21.55	29.45	43.50	-14.05	
254.07	S	Peak	45.36	-19.98	25.38	46.00	-20.62	
399.57	S	Peak	51.09	-15.64	35.45	46.00	-10.55	
517.91	S	Peak	40.42	-13.98	26.44	46.00	-19.56	
960.23	S	Peak	33.65	-8.94	24.71	54.00	-29.29	
4844.00	H	Peak	41.89	0.39	42.28	74.00	-31.72	
4844.00	H	Average	29.12	0.39	29.51	54.00	-24.49	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 03	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2422 MHz	Engineer	:Tai
Operation Mode	:TX LOW	Measurement Antenna Pol.	:HORIZONTAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	57.86	-28.85	29.01	40.00	-10.99	
239.52	S	Peak	59.48	-21.66	37.82	46.00	-8.18	
399.57	S	Peak	53.38	-15.64	37.74	46.00	-8.26	
480.08	S	Peak	49.79	-14.28	35.51	46.00	-10.49	
719.67	S	Peak	40.06	-11.26	28.79	46.00	-17.21	
961.20	S	Peak	41.73	-8.93	32.80	54.00	-21.20	
4844.00	H	Peak	40.94	0.39	41.33	74.00	-32.67	
4844.00	H	Average	29.09	0.39	29.48	54.00	-24.52	
7266.00	H	Peak	---					
9688.00	H	Peak	---					
12110.00	H	Peak	---					
14532.00	H	Peak	---					
16954.00	H	Peak	---					
19376.00	H	Peak	---					
21798.00	H	Peak	---					
24220.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :VERTICAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
33.88	S	Peak	43.15	-17.83	25.31	40.00	-14.69	
67.83	S	Peak	53.74	-28.85	24.89	40.00	-15.11	
119.24	S	Peak	48.59	-21.75	26.83	43.50	-16.67	
126.03	S	Peak	50.93	-21.56	29.37	43.50	-14.13	
399.57	S	Peak	52.05	-15.64	36.41	46.00	-9.59	
482.99	S	Peak	44.15	-14.39	29.76	46.00	-16.24	
4874.00	H	Peak	41.47	0.41	41.87	74.00	-32.13	
4874.00	H	Average	28.78	0.41	29.19	54.00	-24.81	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 06 Test Date :2014-12-12  
 Fundamental Frequency :2437 MHz Temp./Humi. :20 deg\_C/73 RH  
 Operation Mode :TX MID Engineer :Tai  
 EUT Pol. :H Plane Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	56.28	-28.85	27.43	40.00	-12.57	
166.77	S	Peak	53.70	-23.50	30.20	43.50	-13.30	
239.52	S	Peak	59.60	-21.66	37.94	46.00	-8.06	
399.57	S	Peak	53.27	-15.64	37.64	46.00	-8.36	
480.08	S	Peak	49.12	-14.28	34.84	46.00	-11.16	
960.23	S	Peak	44.64	-8.94	35.70	54.00	-18.30	
4874.00	H	Peak	42.02	0.41	42.42	74.00	-31.58	
4874.00	H	Average	28.78	0.41	29.19	54.00	-24.81	
7311.00	H	Peak	---					
9748.00	H	Peak	---					
12185.00	H	Peak	---					
14622.00	H	Peak	---					
17059.00	H	Peak	---					
19496.00	H	Peak	---					
21933.00	H	Peak	---					
24370.00	H	Peak	---					

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Operation Band	:802.11 n40M	Test Date	:2014-12-12
ARFCN	:CH 09	Temp./Humi.	:20 deg_C/73 RH
Fundamental Frequency	:2452 MHz	Engineer	:Tai
Operation Mode	:TX HIGH	Measurement Antenna Pol.	:VERTICAL
EUT Pol.	:H Plane		

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
67.83	S	Peak	63.11	-28.85	34.27	40.00	-5.73	
126.03	S	Peak	51.45	-21.56	29.89	43.50	-13.61	
399.57	S	Peak	50.32	-15.64	34.68	46.00	-11.32	
480.08	S	Peak	44.48	-14.28	30.19	46.00	-15.81	
526.64	S	Peak	38.19	-13.69	24.50	46.00	-21.50	
719.67	S	Peak	37.32	-11.26	26.06	46.00	-19.94	
4904.00	H	Peak	41.34	0.43	41.77	74.00	-32.23	
4904.00	H	Average	28.73	0.43	29.16	54.00	-24.84	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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Operation Band :802.11 n40M  
 ARFCN :CH 09  
 Fundamental Frequency :2452 MHz  
 Operation Mode :TX HIGH  
 EUT Pol. :H Plane

Test Date :2014-12-12  
 Temp./Humi. :20 deg\_C/73 RH  
 Engineer :Tai  
 Measurement Antenna Pol. :HORIZONTAL

Actual FS(dB $\mu$ V/m) = SPA. Reading level(dB $\mu$ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB $\mu$ V/m) + Cable Loss(dB) - Pre\_Amplifier Gain(dB)

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---“ : denotes Noise Floor.

Freq. MHz	Note F/H/E/S	Detector Mode PK/QP/AV	Spectrum Reading Level		Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
			dB $\mu$ V					
165.80	S	Peak	53.26	-23.38	29.88	43.50	-13.62	
239.52	S	Peak	58.47	-21.66	36.82	46.00	-9.18	
399.57	S	Peak	53.44	-15.64	37.80	46.00	-8.20	
480.08	S	Peak	49.36	-14.28	35.07	46.00	-10.93	
714.82	S	Peak	40.51	-11.30	29.21	46.00	-16.79	
959.26	S	Peak	41.89	-8.88	33.02	46.00	-12.98	
4904.00	H	Peak	40.93	0.43	41.36	74.00	-32.64	
4904.00	H	Average	28.73	0.43	29.16	54.00	-24.84	
7356.00	H	Peak	---					
9808.00	H	Peak	---					
12260.00	H	Peak	---					
14712.00	H	Peak	---					
17164.00	H	Peak	---					
19616.00	H	Peak	---					
22068.00	H	Peak	---					
24520.00	H	Peak	---					

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## 11 PEAK POWER SPECTRAL DENSITY

### 11.1 Standard Applicable:

According to §15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 11.2 Measurement Equipment Used:

Refer to section 7.2 for details.

### 11.3 Test Set-up:

Refer to section 7.3 for details. (Spectrum Option)

### 11.4 Measurement Procedure (following the measurement procedure 10.2 of KDB558074):

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW  $\geq$  3 kHz.
4. Set the VBW  $\geq$  3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

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**11.5 Measurement Result:****802.11b**

<b>Frequency</b> <b>MHz</b>	<b>RF Power Density</b>	<b>Maximum Limit</b>
	<b>Reading (dBm)</b>	<b>(dBm)</b>
2412	-19.68	8
2437	-19.40	8
2462	-19.43	8

**802.11g**

<b>Frequency</b> <b>MHz</b>	<b>RF Power Density</b>	<b>Maximum Limit</b>
	<b>Reading (dBm)</b>	<b>(dBm)</b>
2412	-17.98	8
2437	-17.81	8
2462	-18.25	8

**802.11n\_20M**

<b>Frequency</b> <b>MHz</b>	<b>RF Power Density</b>	<b>Maximum Limit</b>
	<b>Reading (dBm)</b>	<b>(dBm)</b>
2412	-14.66	8
2437	-14.48	8
2462	-13.41	8

**802.11n\_40M**

<b>Frequency</b> <b>MHz</b>	<b>RF Power Density</b>	<b>Maximum Limit</b>
	<b>Reading (dBm)</b>	<b>(dBm)</b>
2422	-17.57	8
2437	-17.81	8
2452	-17.83	8

\* Note: Offset = 11.25dB for 2.4G 802.11b/g; Offset = 14.25dB for 2.4G 802.11n20/n40

\*Refer to next page for plots

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## 802.11b

## Power Spectral Density Test Plot (CH-Low)



## Power Spectral Density Test Plot (CH-Mid)



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## Power Spectral Density Test Plot (CH-High)



802.11g

## Power Spectral Density Test Plot (CH-Low)

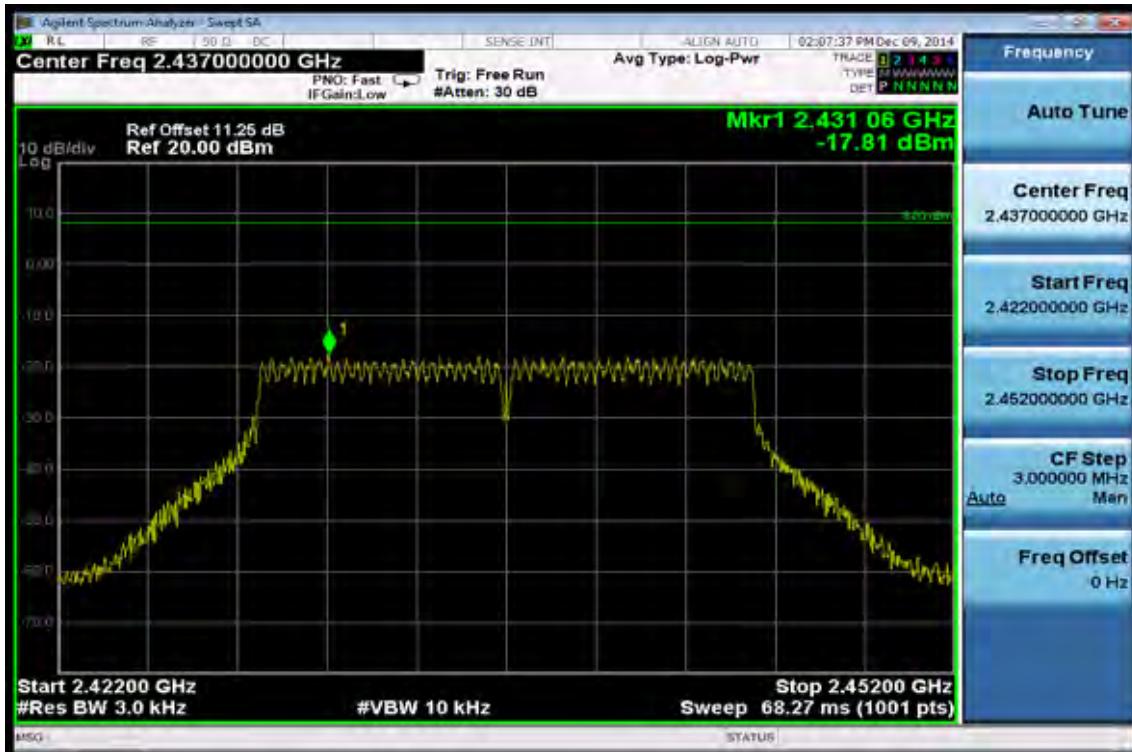
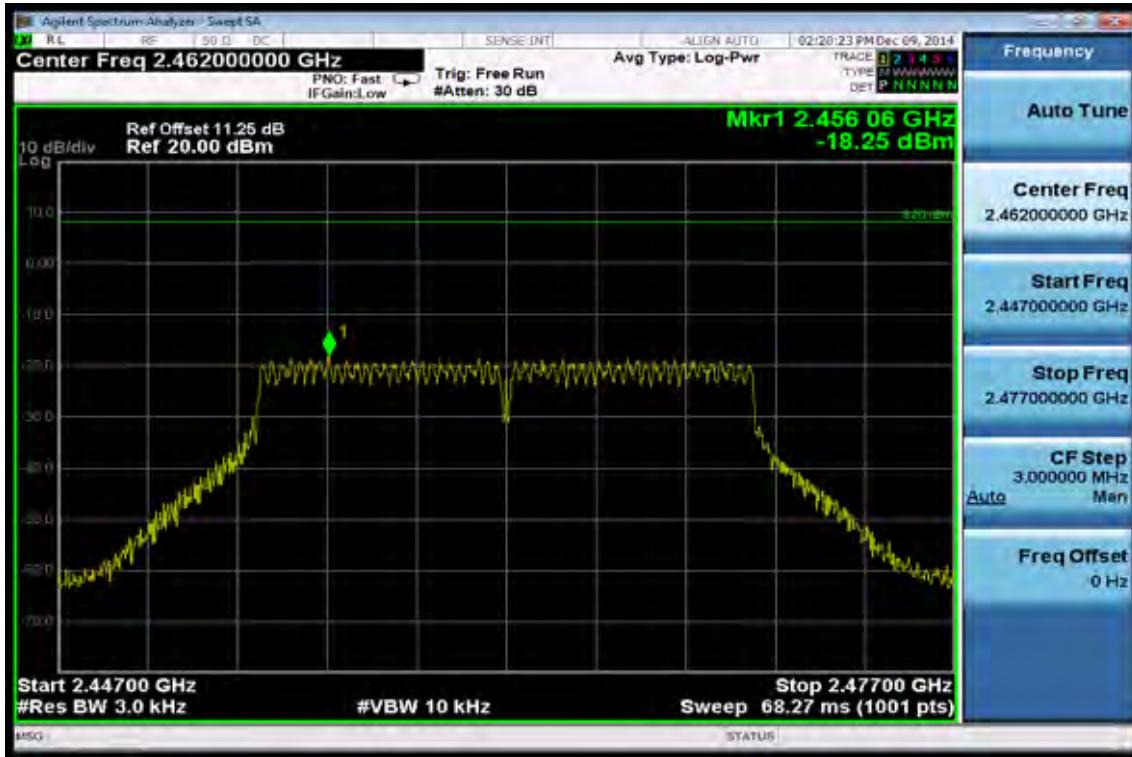


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**Power Spectral Density Test Plot (CH-Mid)****Power Spectral Density Test Plot (CH-High)**

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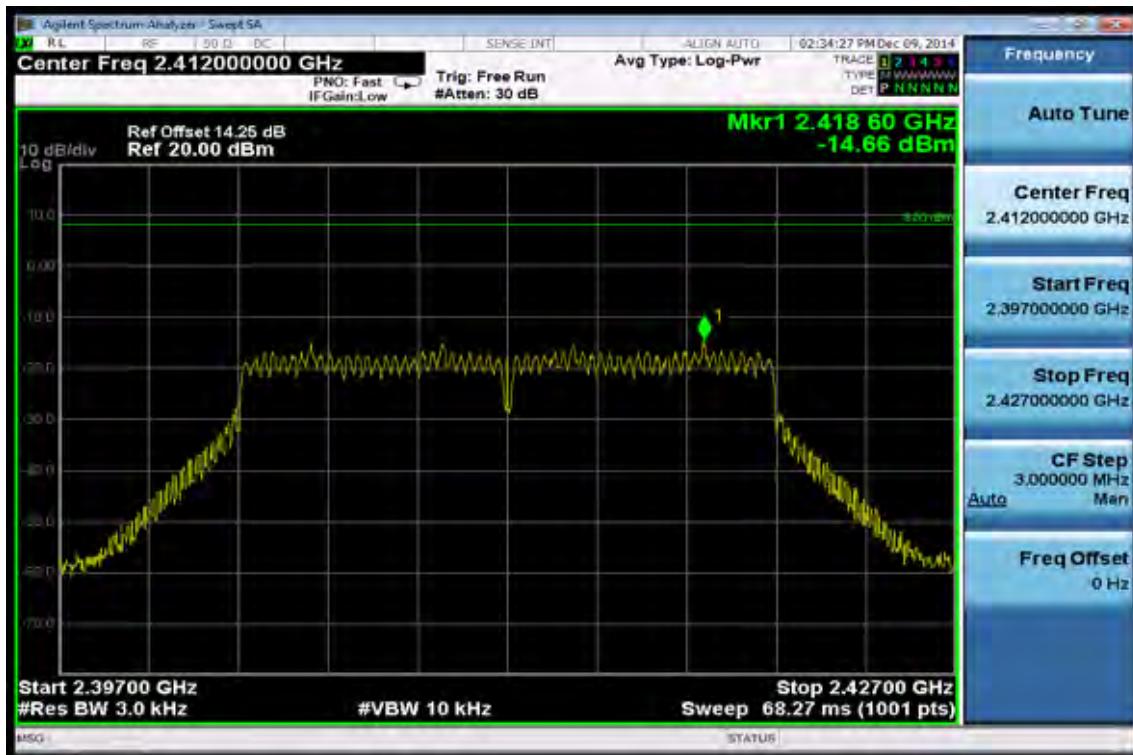
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## 802.11n\_20M

### Power Spectral Density Test Plot (CH-Low)



### Power Spectral Density Test Plot (CH-Mid)



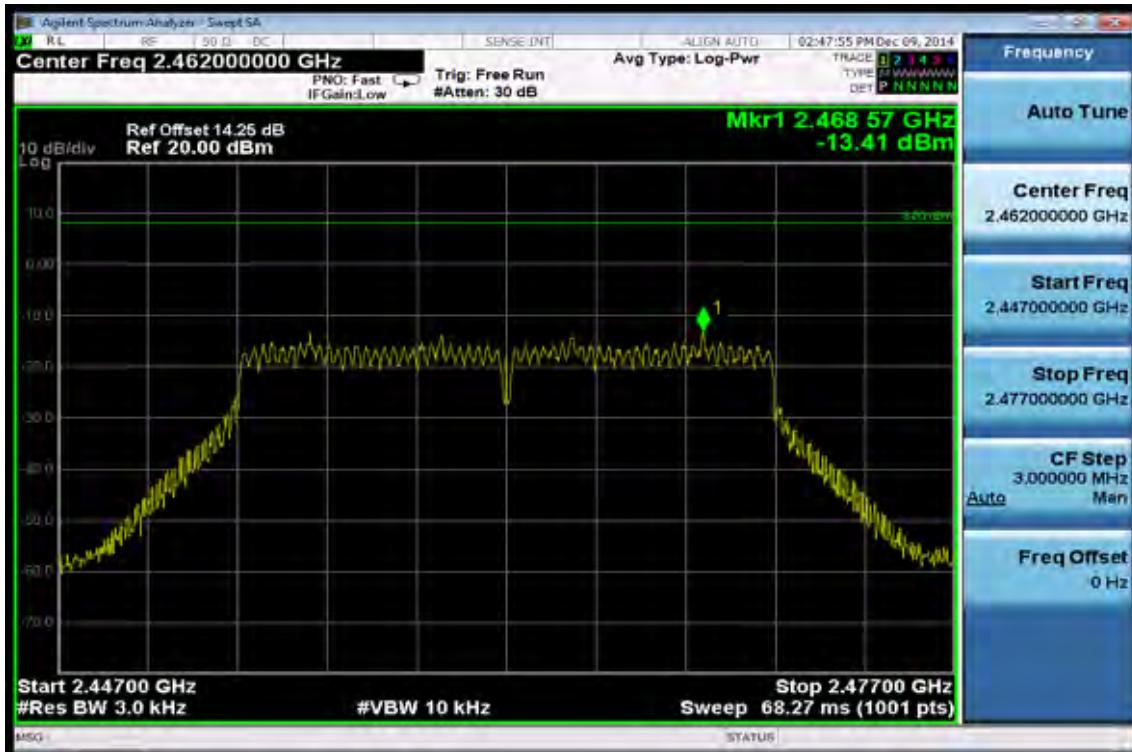
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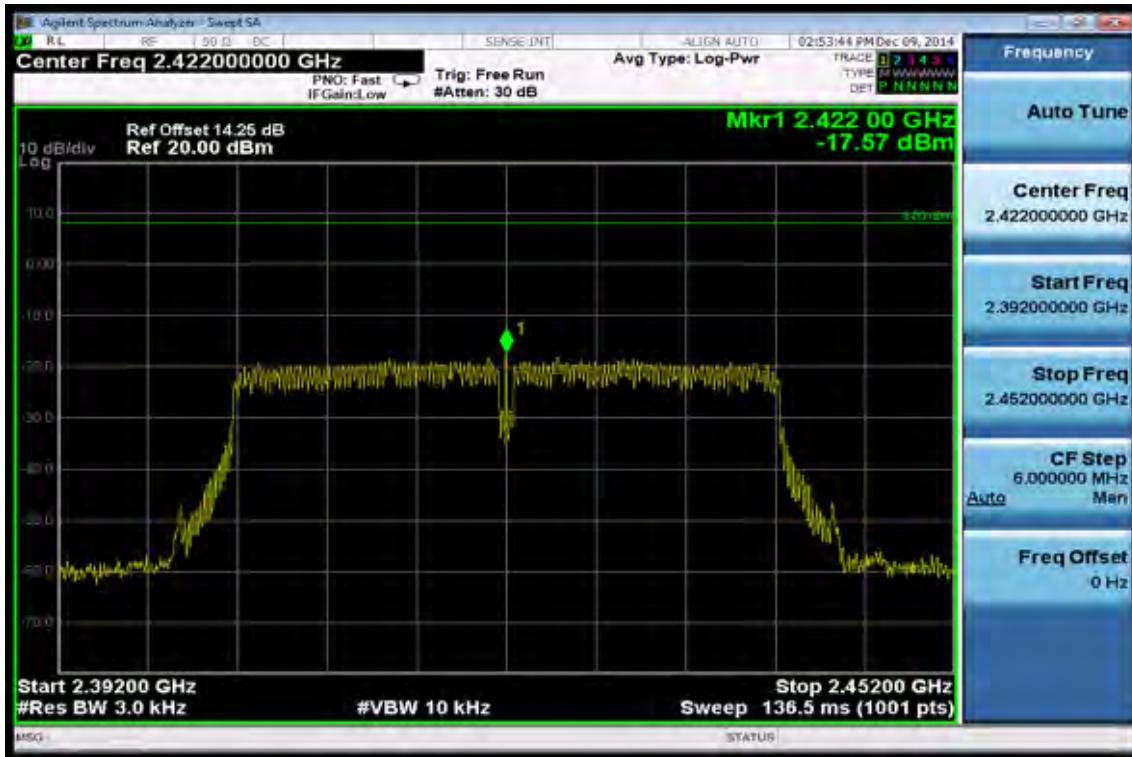
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## Power Spectral Density Test Plot (CH-High)



802.11n\_40M

## Power Spectral Density Test Plot (CH-Low)



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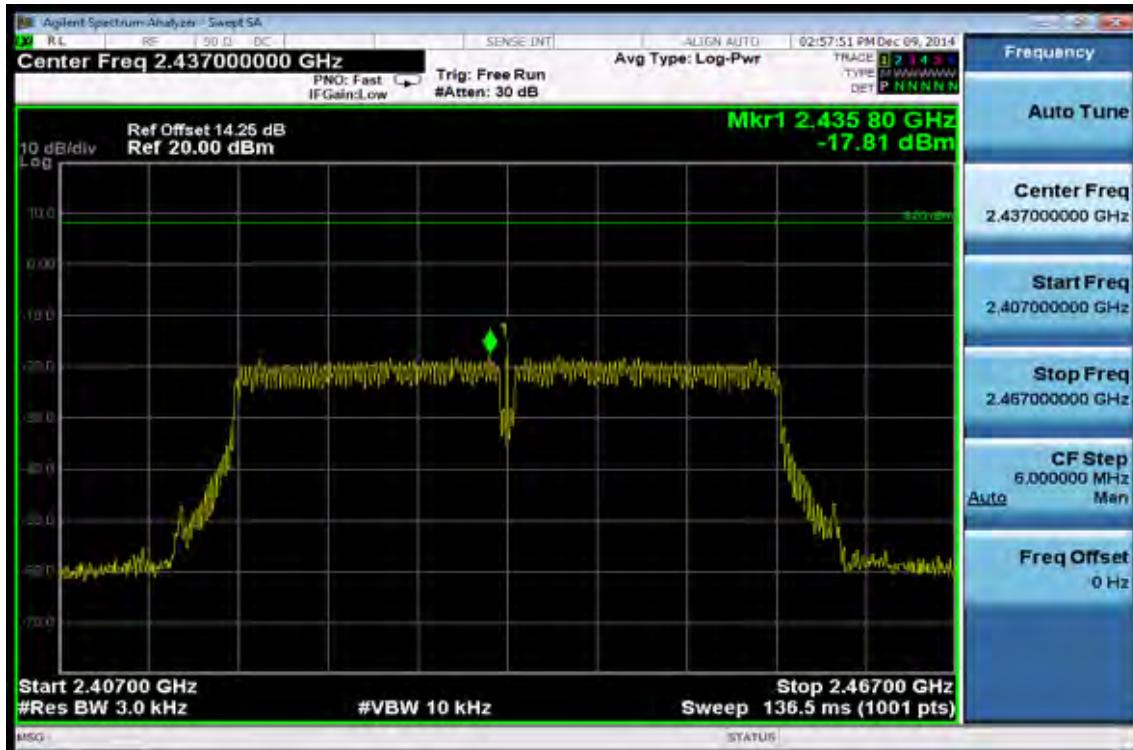
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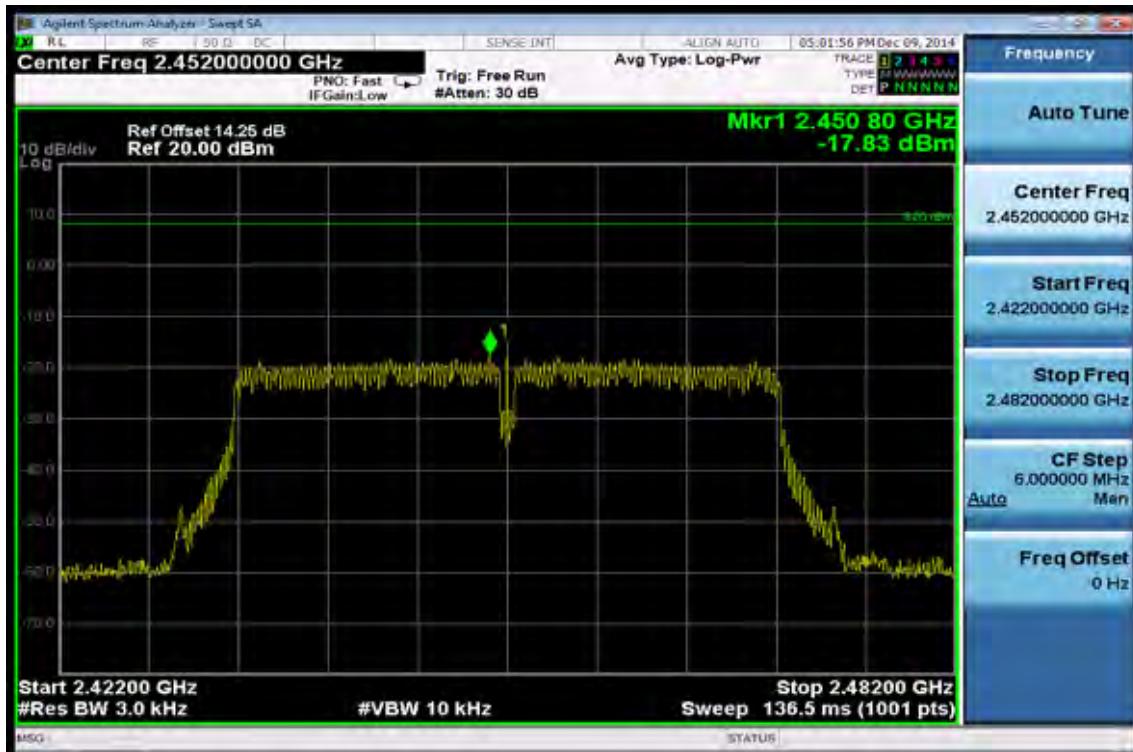
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## Power Spectral Density Test Plot (CH-Mid)



## Power Spectral Density Test Plot (CH-High)



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## 12 ANTENNA REQUIREMENT

### 12.1 Standard Applicable:

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

### 12.2 Antenna Connected Construction:

The directional gains of antenna used for transmitting are: Antenna A: Dipole Antenna, Peak Gain: 1.95dBi, Model No.: N/A, Supplier: WIESON INTERNATIONAL CO., LTD.; Antenna B: Metal Antenna, Peak Gain: 3.0dBi, Model No.: ALC140-052030-A, Supplier: LYNwave; Antenna C: Embedded Antenna, Peak Gain: 3.0dBi, Model No.: ALC140-051021-A, Supplier: LYNwave; Antenna D: Metal Antenna, Peak Gain: 3.0dBi, Model No.: ALO140-052030, Supplier: LYNwave ; and the antenna connectors are designed with unique type RF connector and no consideration of replacement. Please see EUT photo and antenna spec. for details.

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## 13 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

### 13.1 Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1093 RF exposure is calculated.

#### Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-15000	/	/	1.0	30

F = frequency in MHz

\* = Plane-wave equipment power density

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### 13.2 Maximum Permissible Exposure (MPE) Evaluation

#### 802.11b

		Average Power Output (dBm)				Required Limit	
CH	Frequency (MHz)	Data Rate					
		1	2	5.5	11		
1	2412	14.89	14.65	14.49	14.32	1 Watt = 30 dBm	
6	2437	14.95	14.74	14.52	14.36	1 Watt = 30 dBm	
11	2462	14.90	14.71	14.50	14.35	1 Watt = 30 dBm	

#### MPE Prediction (802.11b)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum average output power at antenna input	14.95	(dBm)
Maximum average output power at antenna input	31.26079367	(mW)
Duty cycle:	100	(%)
Maximum Pav :	31.26079367	(mW)
Antenna gain (typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2437	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.012415	(mW/cm <sup>2</sup> )

#### Measurement Result

The predicted power density level at 20 cm is 0.012415mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1mW/cm<sup>2</sup> at 2437MHz.

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## 802.11g

		Average Power Output(dBm)								
CH	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
1	2412	12.90	12.84	12.79	12.75	12.69	12.62	12.57	12.51	1 Watt = 30 dBm
6	2437	12.98	12.89	12.84	12.79	12.72	12.65	12.60	12.54	1 Watt = 30 dBm
11	2462	12.91	12.86	12.81	12.78	12.71	12.63	12.59	12.53	1 Watt = 30 dBm

### MPE Prediction (802.11g)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4 \cdot R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum average output power at antenna input	12.98	(dBm)
Maximum average output power at antenna input	19.86094917	(mW)
Duty cycle:	100	(%)
Maximum Pav :	19.86094917	(mW)
Antenna gain (typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2437	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.007888	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.007888mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1mW/cm<sup>2</sup> at 2437MHz.

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## 802.11n\_20M (MIMO CH0+CH1)

CH	Frequency (MHz)	Average Power Output(dBm)								Required Limit
		Data Rate								
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7			
1	2412	13.62	13.55	13.49	13.43	13.39	13.34	13.30	13.23	1 Watt = 30 dBm
6	2437	13.91	13.85	13.78	13.73	13.69	13.65	13.62	13.59	1 Watt = 30 dBm
11	2462	13.75	13.71	13.70	13.67	13.64	13.61	13.59	13.57	1 Watt = 30 dBm

### MPE Prediction (802.11 n\_20M)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum average output power at antenna input	13.91	(dBm)
Maximum average output power at antenna input	24.60367604	(mW)
Duty cycle:	100	(%)
Maximum Pav :	24.60367604	(mW)
Antenna gain (typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2437	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.009771	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.009771mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1mW/cm<sup>2</sup> at 2437MHz.

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**802.11n\_40M (MIMO CH0+CH1)**

CH	Frequency (MHz)	Average Power Output(dBm)								Required Limit
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
1	2422	13.74	13.69	13.65	13.62	13.57	13.52	13.49	13.45	1 Watt = 30 dBm
6	2437	13.95	13.89	14.12	14.02	13.91	13.84	14.00	13.68	1 Watt = 30 dBm
11	2452	13.84	13.81	13.78	13.74	13.71	13.65	13.61	13.58	1 Watt = 30 dBm

**MPE Prediction (802.11 n\_40M)**

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum average output power at antenna input	13.95	(dBm)
Maximum average output power at antenna input	24.83133105	(mW)
Duty cycle:	100	(%)
Maximum Pav :	24.83133105	(mW)
Antenna gain (typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2437	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.009862	(mW/cm <sup>2</sup> )

**Measurement Result**

The predicted power density level at 20 cm is 0.009862mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1mW/cm<sup>2</sup> at 2437MHz.

*~ End of Report ~*

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